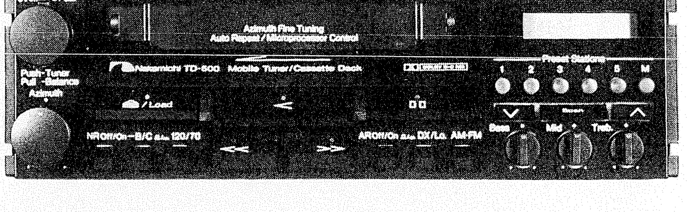
Nakamichi

Service Manual

Nakamichi
TD-500
TD-500E
TD-500D

Mobile Tuner/Cassette Deck


Azimuth Fine Tuning
Auto Repeat / Microprocessor Control
Nakamichi TD-500 Mobile Tuner/Cassette Deck
Preset Stations
Push-Tuner
Pull-Balance
Azimuth
Load
Bass
Mid
Treb.

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1. GENERAL

1.1. Packing Materials, Owner's Manual and Auxiliary Parts

Part No.	Description	Q'ty
0F03844A	Outer Carton TD-500	1
0F03852A	Outer Carton TD-500E	1
0F03834A	Outer Carton TD-500D	1
0F03814A	Inner Carton TD-500 (U.S.A.)	1
0F03815A	Inner Carton TD-500 (Canada, Australia, Others & Japan)	1
0F03829A	Inner Carton TD-500E	1
0F03833A	Inner Carton TD-500D	1
0F03831A	Packing	2
0F03832A	Sleeve	1
0D04479A	Owner's Manual TD-700/TD-500 (Japanese)	1
0D04480A	Owner's Manual TD-700/TD-500 (English)	1
0D04482A	Owner's Manual TD-700/TD-500, TD-700E/TD-500E & TD-700D/TD-500D (English/German/French)	1
0D04481A	French Text TD-700/TD-500 (Canada)	1
0B90003A	Fuse 0.5A	1
0B90042A	Fuse 10A	1
0B81267E	4P Terminal TD-500 & TD-500E	1
0B81271E	4P Terminal TD-500D	1
0D04207A	Metal Stay (except Japan)	1
0B80067B	Ground Wire (except Japan)	1
0J04872A	U-shaped Grip (except Japan)	2
0H04459A	Trim Panel Rim (except Japan)	1
0J04879A	Sleeve Spacer A (thin type) (except Japan)	1
0J04880A	Sleeve Spacer B (thick type) (except Japan)	1
HA04665A	Mobile Traffic Information Processor TD-500D	1

1.2. Note on Operation

If the Rewind button is pressed before the cassette tape loading process is completed, unexpected action may occur depending on the condition of the Mobile Tuner/Cassette Deck. The cassette tape may be ejected or played back unwillingly.

2. REMOVAL PROCEDURES

2.1. Top and Bottom Covers

Refer to Fig. 2.1.

(1) Remove F01 (Mounting Sleeve).

(2) Loosen screws F02 (1 pce.) and F03 (2 pcs.) and remove F04 (Top Cover).

(3) Loosen screws F05 (1 pce.) and F06 (3 pcs.) and remove F07 (Bottom Cover).

2.2. Front Panel Ass'y

Refer to Fig. 2.2.

(1) Remove the Top and Bottom Covers referring to item 2.1.

(2) Loosen F01 and pull out knobs F02, F03 and F04.

(3) Loosen F05 and remove F06 (Front Panel Ass'y including Cleaning Flap Ass'y).

2.3. Control P.C.B. Ass'y and Front Chassis

Refer to Fig. 2.2.

(1) Remove the Front Panel Ass'y referring to item 2.2.

(2) Loosen F07 and remove F08 (Control P.C.B. Ass'y).

(3) Loosen F09 and F10 and remove F11, F12, F13 and F14.

(4) Insert a small flat-blade screwdriver into the holes in the Main Chassis as shown in the figure and lift the upper part of the connector to unlock the flexible P.C.B. of the LCD Ass'y.

(5) Disconnect connectors A and B and disassemble F15 (Front Chassis including LCD Ass'y, etc.).

2.4. Volume P.C.B. Ass'y

Refer to Fig. 2.2.

(1) Remove the Front Chassis referring to item 2.3.

(2) Loosen F16 and disassemble F17 and F18 (Volume P.C.B. Ass'y).

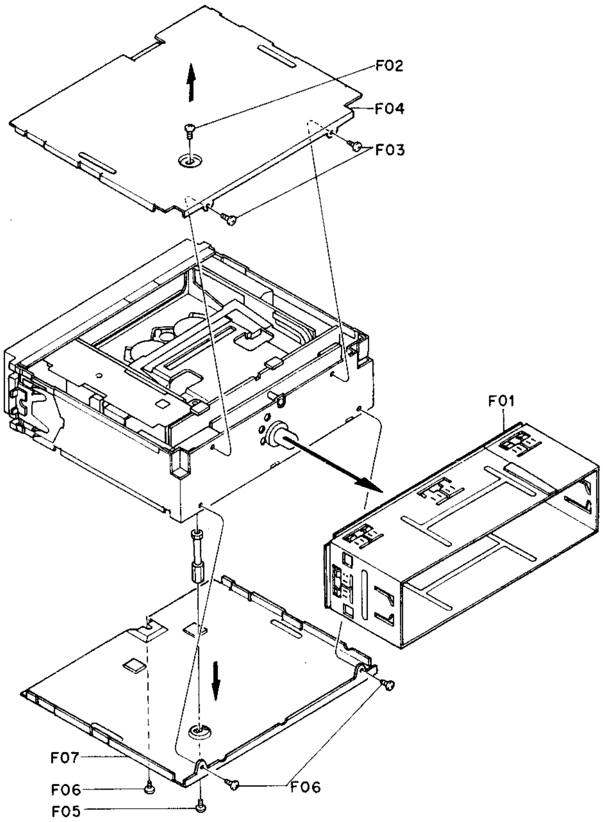

F02
F04
F03
F01
F07
F06
F05
F06

Fig. 2.1

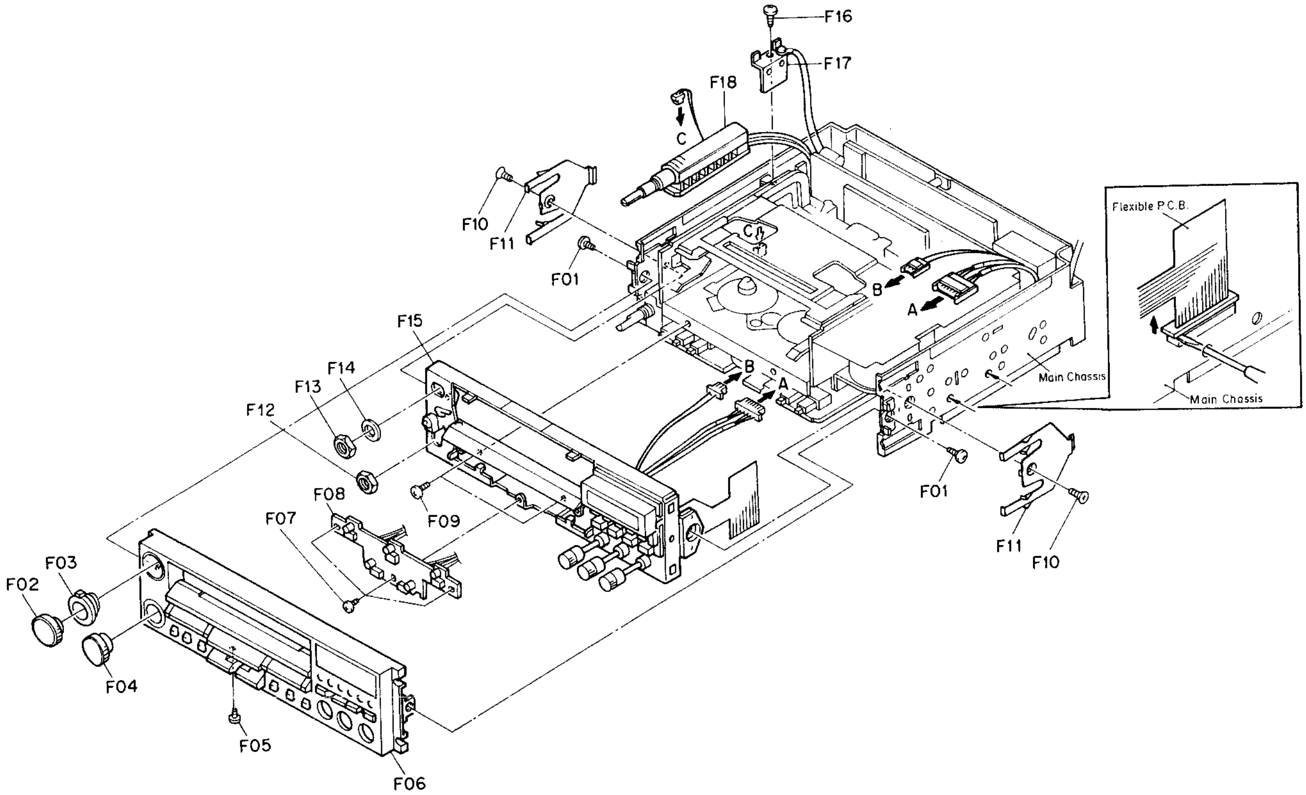

F16
F17
F18
C
F10
F11
F01
C
B
A
Flexible P.C.B.
Main Chassis
Main Chassis
F15
F14
F13
F12
B
A
F08
F09
F07
F03
F02
F04
F05
F06
F01
F11
F10

Fig. 2.2

2.5. Tuner P.C.B. Ass'y

Refer to Fig. 2.3.

(1) Remove the Top and Bottom Covers referring to item 2.1.
(2) Loosen F01, disconnect connectors A and B, and remove F02 (Tuner P.C.B. Ass'y) and F03.

2.6. Motor P.C.B. Ass'y

Refer to Fig. 2.3.

(1) Remove the Top and Bottom Covers referring to item 2.1.
(2) Loosen F04 and disconnect connectors C, D, E and F.
(3) Remove F05 (Motor P.C.B. Insulator) and F06 (Motor P.C.B. Ass'y).

2.7. Amp. P.C.B. Ass'y

Refer to Fig. 2.3.

(1) Remove the Top and Bottom Covers referring to item 2.1.
(2) Remove the Tuner P.C.B. Ass'y and Motor P.C.B. Ass'y referring to items 2.5 and 2.6.
(3) Loosen F07 and disconnect connector G.
(4) Lift F08 (Amp. P.C.B. Ass'y), disconnect connectors H, I and J, and remove F08 (Amp. P.C.B. Ass'y).

2.8. Transport Mechanism Ass'y

Refer to Fig. 2.4.

(1) Remove the Front Chassis and the Volume P.C.B. Ass'y referring to items 2.3 and 2.4.
(2) Loosen F01, remove F02, and lift F03 (Motor P.C.B. Ass'y).
(3) Disconnect connectors A, B, C and D.
(4) Pull out F04 (Amp. P.C.B. Ass'y) and disconnect connector E.
(5) Loosen F05, lift F06 (Transport Mechanism Ass'y and Motor P.C.B. Ass'y), and disconnect connector F to separate F06.

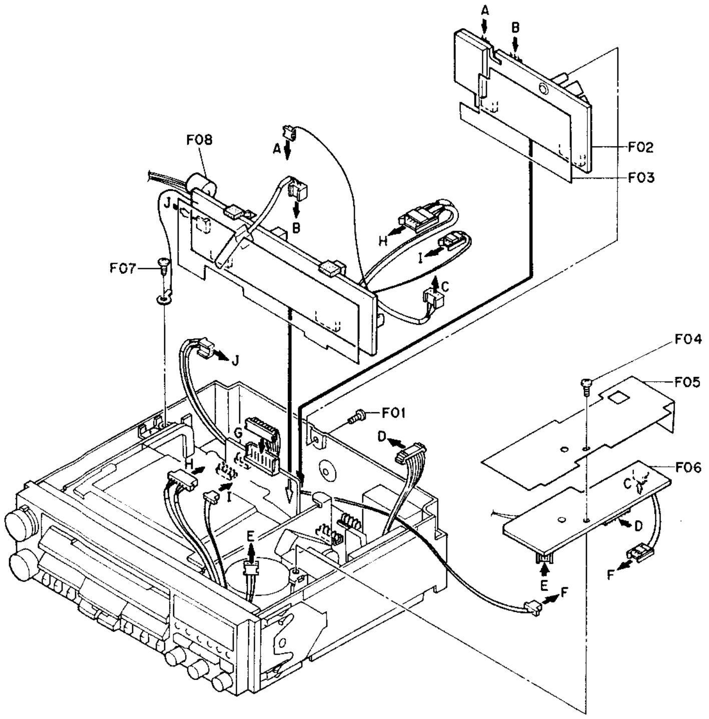


Fig. 2.3

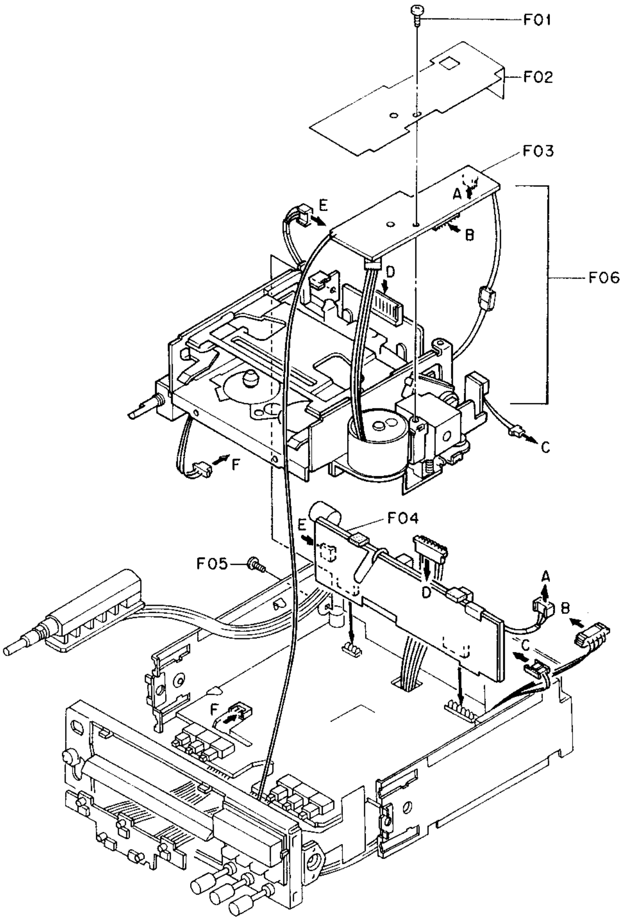


Fig. 2.4

3. TEST TAPES AND GAUGES

(1) 1 kHz Track Alignment Tape (DA09007B)
(2) 15 kHz Azimuth Tape (DA09004B)
(3) 400 Hz Level Tape (DA09005B)
(4) 3 kHz Speed & Wow/Flutter Tape (DA09006C)
(5) Torque Gauge for Forward Playback (DA09082A)
(6) Torque Gauge for F.F. & REW (DA09084A)
(7) Head Alignment Gauge (DA09092A)

4. MECHANICAL ADJUSTMENTS

Note: Before adjustment, remove the Top and Bottom Covers referring to item 2.1.

4.1. Tape Speed Adjustment

Refer to Fig. 4.1.

(1) Connect a frequency counter to Output Jack.
(2) Load a 3 kHz Speed & Wow/Flutter Tape and play it back.
(3) Adjust the potentiometer incorporated in the Main Motor Ass'y to obtain a 3 kHz reading on the frequency counter.

4.2. Tape Guide Height Adjustment

(1) For Serial Nos.: C60405146 - (TD-500 & TD-500E) and C60601390 - (TD-500D)

Note: Remove the Cleaning Flap before loading the Head Alignment Gauge. When ejecting the Head Alignment Gauge pay attention so as not to strike against the Tape Slot Cover.

Refer to Fig. 4.2.

(a) Turn the Azimuth Fine Tuning Control fully clockwise and then return it by 15 clicks to set it to the center position.
(b) Load a base of the Head Alignment Gauge carefully and set the Mobile Tuner/Cassette Deck in Play mode.
(c) Place a small block of the Head Alignment Gauge on the base.
(d) Slide the small block against the Supply Tape Guide, and adjust the Tape Guide Height Adjustment Screw so that the small block is accepted by the Supply Tape Guide.

(2) For Serial Nos.: C60401001 - 05145 (TD-500 & TD-500E) and C60601001 - 01389 (TD-500D)

Refer to Fig. 4.3.

(a) Set the Azimuth Fine Tuning Control fully clockwise and then return it by 15 clicks to set it to the center position.
(b) Connect a VTVM to the Output Jacks.
(c) Load a 1 kHz Track Alignment Tape and play it back.
(d) Turn the Tape Guide Height Adjustment Screw to obtain minimum readings on the VTVM for both channels.

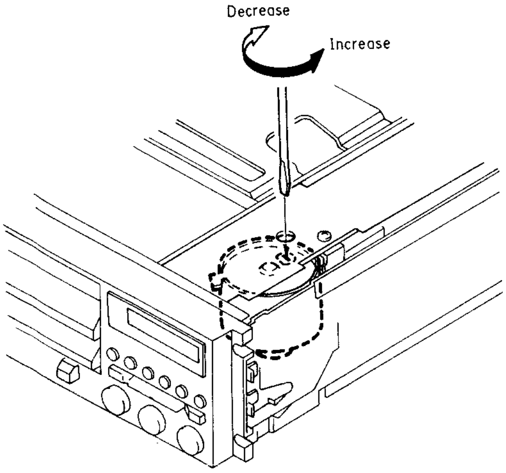


Fig. 4.1

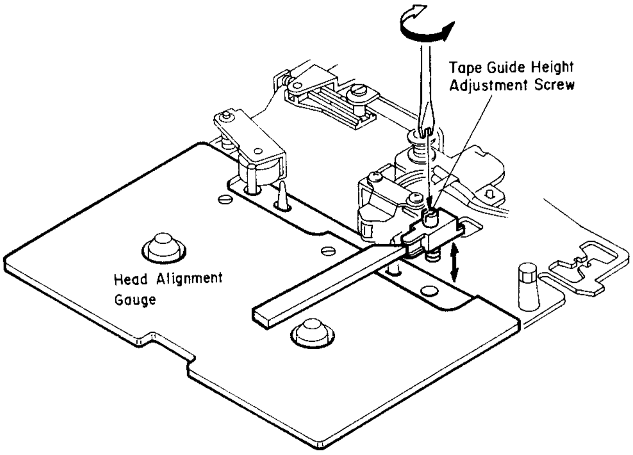


Fig. 4.2
Serial No.: C60405146 -
(TD-500 & TD-500E)
C60601390 - (TD-500D)

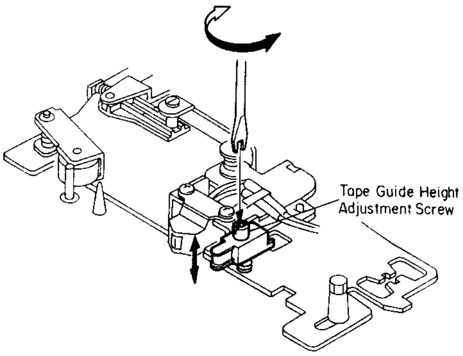


Fig. 4.3
Serial Nos.: C60401001 - 05145
(TD-500 & TD-500E)
C60601001 - 01389
(TD-500D)

4.3. Playback Head Height Adjustment and Azimuth Alignment

(1) For Serial Nos.: C60405146 - (TD-500 & TD-500E) and C60601390 - (TD-500D)

Refer to Fig. 4.4.

(a) Connect a VTVM to the Output Jacks.
(b) Set the Azimuth Fine Tuning Control to the center position referring to 4.2.-(1)-(a).
(c) Load a 1 kHz Track Alignment Tape and play it back.
(d) Turn the Playback Head Height Adjustment Screw to obtain minimum readings on the VTVM for both channels.
(e) Load a 15 kHz Azimuth Alignment Tape and play it back.
(f) Turn the Azimuth Alignment Screw to obtain maximum readings on the VTVM for both channels.
(g) Repeat above steps (c) through (f) one or two times to obtain optimum performance.

(2) For Serial Nos.: C60401001 - 05145 (TD-500 & TD-500E) and C60601001 - 01389 (TD-500D)

Refer to Fig. 4.5.

(a) Connect a VTVM to the Output Jacks.
(b) Load a 15 kHz Azimuth Alignment Tape and play it back.
(c) Turn the Azimuth Alignment Screw to obtain maximum readings on the VTVM for both channels.

Note: Playback Head Height Adjustment Screw is not provided in these Models.

4.4. Torque Adjustment

Refer to Fig. 4.6.

(1) Load a Torque Gauge for Forward Playback.
(2) Set the Mobile Tuner/Cassette Deck in Play mode.
(3) Check whether the playback torque and back tension torque on the Gauge are as follows:
Playback torque: 35 g-cm —5 to +10 g-cm
Back tension torque: 2.5 g-cm —0.15 to +1 g-cm
(4) If the playback torque is out of the above range, turn the Playback Torque Adjustment Screw with a small flat-blade screwdriver to obtain a satisfactory result.
(5) Set the Mobile Tuner/Cassette Deck in Stop mode and then load a Torque Gauge for F.F. & REW.
(6) Set the Mobile Tuner/Cassette Deck in F.F. or Rewind mode and check that the torque is in the range shown below:
F.F./Rewind torque: 60 g-cm —10 to +40 g-cm (50 to 100 g-cm)

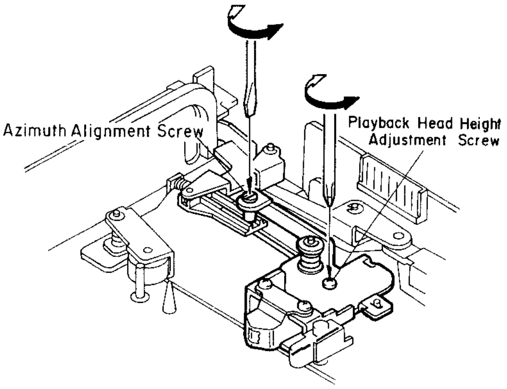


Fig. 4.4
Serial No.: C60405146 -
(TD-500 & TD-500E)
C60601390 - (TD-500D)

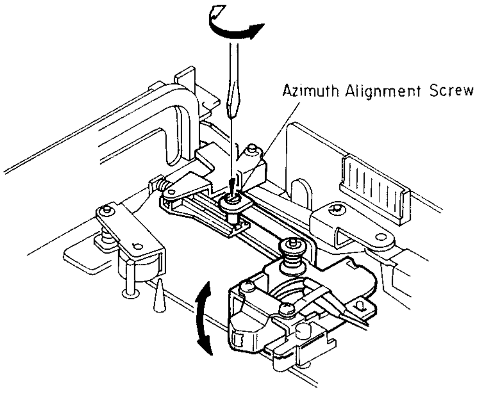
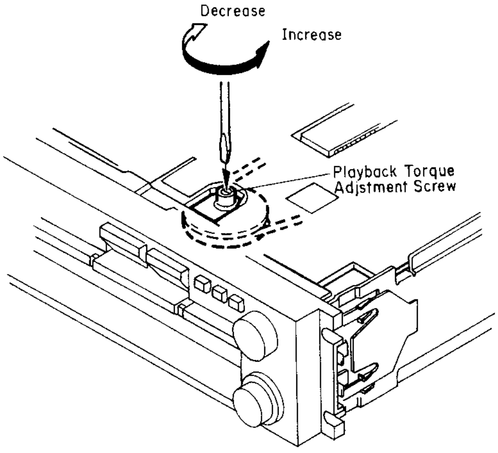


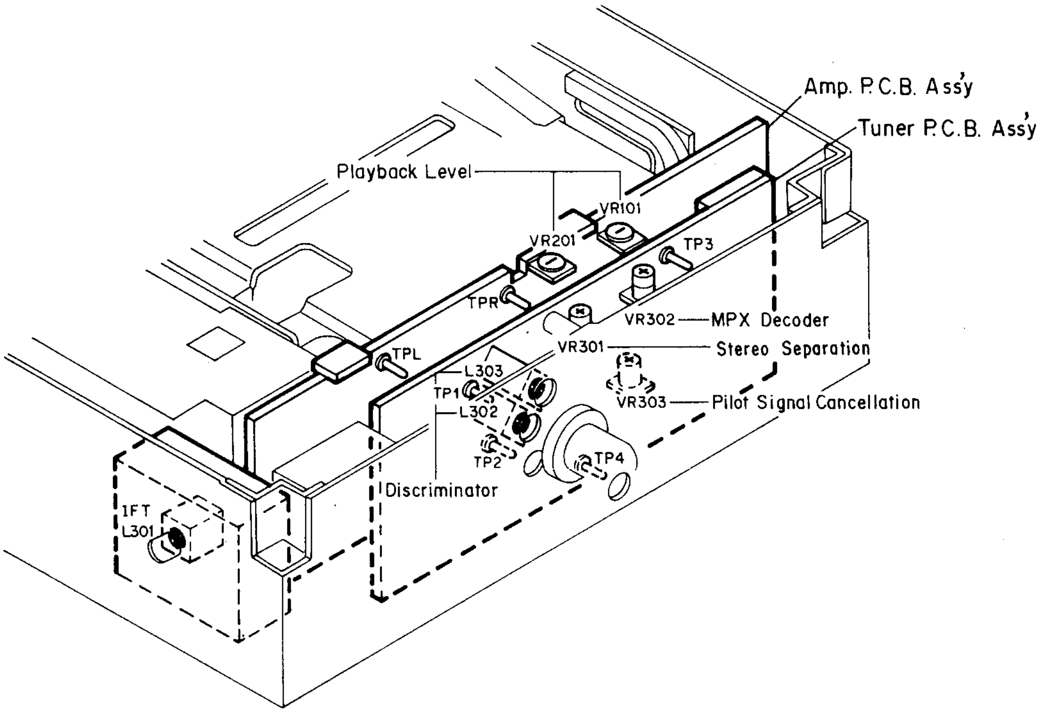
Fig. 4.5
Serial Nos.: C60401001 - 05145
(TD-500 & TD-500E)
C60601001 - 01389
(TD-500D)



(Bottom View)

Fig. 4.6

5. PARTS LOCATION FOR ELECTRICAL ADJUSTMENT



Amp. P.C.B. Ass'y
Tuner P.C.B. Ass'y
Playback Level
VR101
VR201
TP3
TPR
VR302 MPX Decoder
TPL
VR301 Stereo Separation
L303
TP1
L302
VR303 Pilot Signal Cancellation
TP2
TP4
Discriminator
1FT
L301

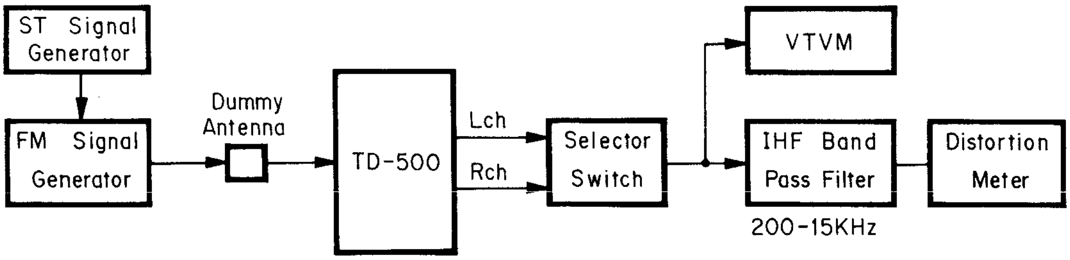
Fig. 5

6. ELECTRICAL ADJUSTMENTS

6.1. Cassette Deck Section

Note: Electrical adjustment should be performed after mechanical adjustment is completed.

STEP	ITEM	SIGNAL SOURCE	OUTPUT CONNECTION	MODE	ADJUST-MENT	REMARKS
1	Preliminary Step			Volume - Max. Fader, Balance - Center Bass, Mid, Treble - Center		Set the Mobile Tuner/Cassette Deck to the initial mode (see MODE).
2	Playback Level Adjustment	400 Hz Level Tape	VTVM to TPL, TPR on Amp. P.C.B.	Playback Eq. SW - 70 μs	Amp. P.C.B. VR101 VR201	1. Load a 400 Hz level tape and play it back. 2. Adjust VR101 (VR201) to obtain 350 mV on the VTVM.



ST Signal Generator
FM Signal Generator
Dummy Antenna
TD-500
Lch
Rch
Selector Switch
VTVM
IHF Band Pass Filter
200-15KHz
Distortion Meter

Fig. 6 Connection Diagram for FM Adjustment

6.2. Tuner Section (FM Adjustment)

Note: Adjustment should be made in a shielded room in principle.

STEP	ITEM	OUTPUT CONNECTION	MODE	ADJUST-MENT	REMARKS
1	Preliminary Step	See Fig. 6	Mobile Tuner/ Cassette Deck Dolby NR - OFF Band Selector - FM Volume - Max. Fader, Balance - Center Bass, Mid, Treble - Center FM Generator Frequency - 98 MHz RF Level - 65 dBf Modulation Signal - 1 kHz (Stereo/ Mono) Modulation Ratio - (See REMARKS)		1. Connect necessary instruments to the Mobile Tuner/Cassette Deck referring to connection diagram (Fig. 6). 2. Set the Mobile Tuner/Cassette Deck to the initial mode (see MODE). Modulation Ratio: **Stereo** TD-500 (U.S.A. & Canada): Audio 1 kHz 90%, Pilot 19 kHz 10% TD-500 (Australia & Others), TD-500E & TD-500D: Audio 1 kHz 50%, Pilot 19 kHz 10% **Mono** TD-500 (U.S.A. & Canada): Audio 1 kHz 100% TD-500 (Australia & Others), TD-500E & TD-500D: Audio 1 kHz 60%
2	IFT Adjustment		Mobile Tuner/ Cassette Deck Same as above FM Generator Frequency - 98 MHz RF Level - 65 dBf Modulation - Mono	Front-end IFT Coil L301	With decreasing the RF level gradually from 65 dBf to 30 dBf, adjust IFT coil L301 to obtain minimum distortion. (Do not turn other components on the Front-end.)
3	MPX Decoder Adjustment	Frequency Counter to TP3 on Tuner P.C.B.	Mobile Tuner/ Cassette Deck Same as above FM Generator Frequency - 98 MHz RF Level - 0 dBf Modulation - Mono	Tuner P.C.B. VR302	1. Cut the RF signal applied to the Mobile Tuner/Cassette Deck. 2. Adjust VR302 to obtain 76 kHz ±1 kHz on the frequency counter.
4	Discriminator Adjustment	DC Millivoltmeter between TP1 and TP2 on Tuner P.C.B.	Mobile Tuner/ Cassette Deck Same as above FM Generator Frequency - 98 MHz RF Level - 65 dBf Modulation - Mono	Tuner P.C.B. L302, L303	1. Turn L302 (black core) to obtain ±50 mV on the DC millivoltmeter. 2. Turn L303 (white core) to obtain minimum distortion on the distortion meter. 3. Repeat above 2 and 3 two or three times.
5	Pilot Signal Cancellation Adjustment		Mobile Tuner/ Cassette Deck Same as above FM Generator Frequency - 98 MHz RF Level - 65 dBf Modulation - Stereo	Tuner P.C.B. VR303	1. Set the modulation of the FM Generator as follows: o Cut audio signal 1 kHz o Apply only pilot 19 kHz 10% 2. Adjust VR303 to obtain minimum readings on the VTVM for both channels. The minimum reading should be less than -40 dB.
6	Stereo Separation		Mobile Tuner/ Cassette Deck Same as above FM Generator Frequency - 98 MHz RF Level - 65 dBf Modulation - Stereo	Tuner P.C.B. VR301	1. Cut the 1 kHz modulation of R channel of the stereo modulator. Namely, apply 1 kHz signal only to L channel. 2. Adjust VR301 to obtain minimum reading for R channel on the VTVM. 3. Apply 1 kHz signal only to R channel. 4. Adjust VR301 to obtain minimum reading for L channel on the VTVM. 5. Check whether the readings in 2 and 4 are less than -30 dB. If not, repeat 1 through 4 till satisfactory results are obtained.
7	Offset Voltage Check on IC301	DC Millivoltmeter across IC301-14 and GND on Tuner P.C.B.	Mobile Tuner/ Cassette Deck Same as above FM Generator Frequency - 98 MHz RF Level - 65 dBf Modulation - Mono		Note: This check will be required only if IF Amp. IC301 (LA1140) on the Tuner P.C.B. Ass'y is replaced with new one. At that time, conduct Step 3 (adjustment of L302 and L303 on Tuner P.C.B.) and then check the following: 1. Set the modulation signal of FM generator to 1 kHz (Mono). 2. Check whether the reading on the DC millivoltmeter is less than 5 mV. 3. If not, replace with another LA1140 and repeat above 1 and 2 after re-adjustment of Step 3.

7. MECHANISM ASS'Y AND PARTS LIST

7.1. Synthesis

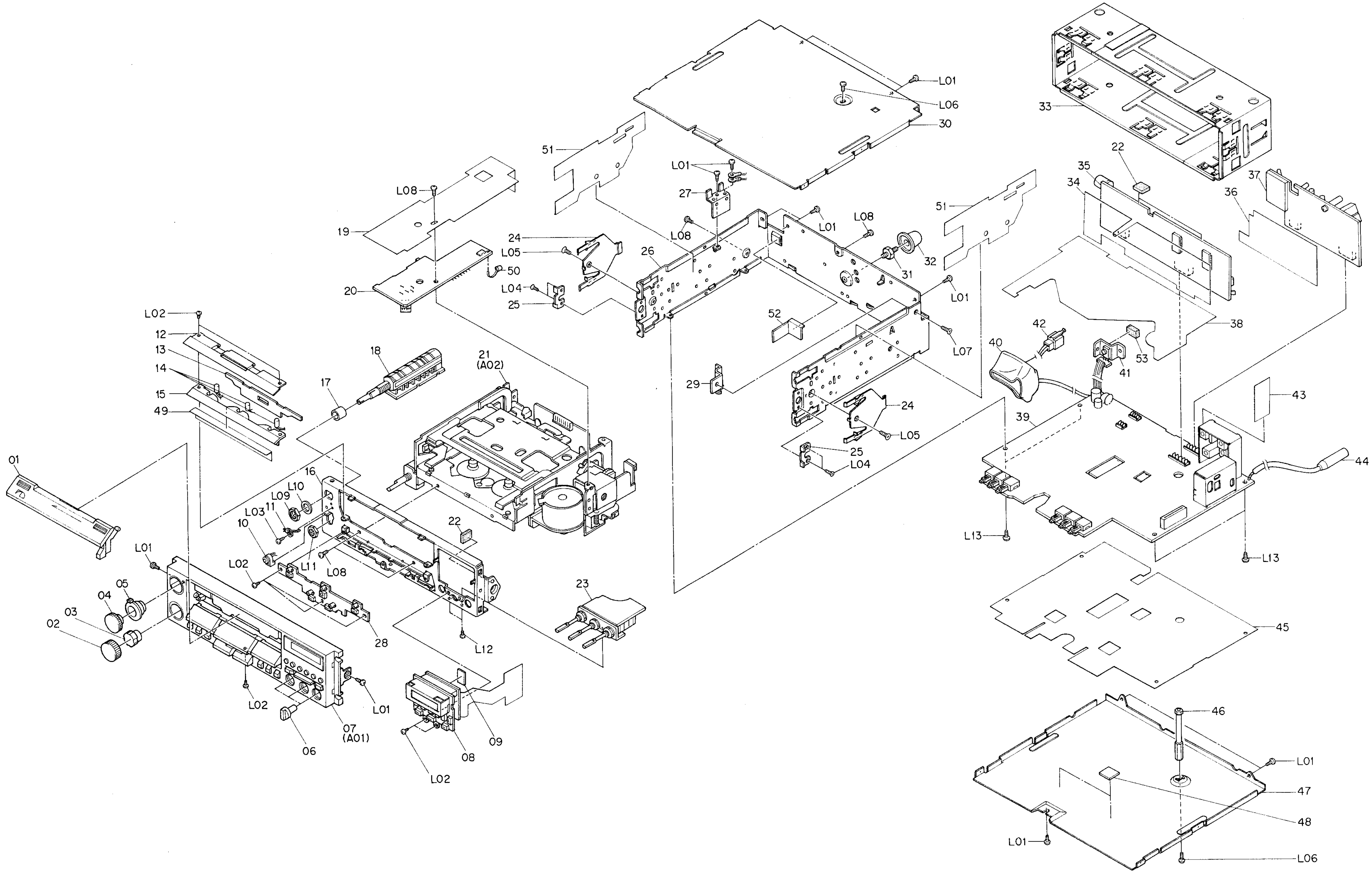

L01
L06
30
33
51
L01
27
L08
19
24
L05
50
L04
25
20
26
L08
L01
L08
31
32
51
L01
L07
22
35
34
37
36
38
52
29
24
L05
25
L04
42
40
53
41
43
39
44
L13
L13
45
46
L01
47
48
L01
L06
L02
12
13
14
15
49
18
21
(A02)
17
01
16
L10
L09
L03
11
10
22
L01
L02
L11
L08
05
04
03
02
28
L12
23
L02
L01
06
07
(A01)
08
09
L02

Fig. 7.1

Schematic Ref. No.	Part No.	Description	Q'ty
		Synthesis	
01	HA04780A	Cleaning Flap Ass'y TD-500	1
	HA04782A	Cleaning Flap Ass'y TD-500E	1
	HA04781A	Cleaning Flap Ass'y TD-500D	1
02	0H04455A	Azimuth Knob Cap	1
03	HA04674A	Azimuth Knob Ass'y	1
04	HA04675A	Volume Knob Ass'y	1
05	0H04454A	Fader Knob	1
06	0H04456A	Tone Control Knob	3
07	HA04773A	Front Panel Ass'y TD-500 (Serial No.: C60404001 -)	1
	HA04774A	Front Panel Ass'y TD-500E (Serial No.: C60404001 -)	1
	HA04777A	Front Panel Ass'y TD-500D (Serial No.: C60601301 -)	1
	HA04676C	Front Panel Ass'y TD-500 (Serial Nos.: C60401001 - 04000)	1
	HA04678C	Front Panel Ass'y TD-500E (Serial Nos.: C60401001 - 04000)	1
	HA04680C	Front Panel Ass'y TD-500D (Serial Nos.: C60601001 - 01300)	1
08	BA05459A	LCD Ass'y TD-500 (Japan)	1
	BA05460A	LCD Ass'y TD-500 (U.S.A. & Canada)	1
	BA05461A	LCD Ass'y TD-500 (Australia & Others), TD-500E & TD-500D (LCD Ass'y includes the followings)	1
09	(BA05516A)	(Buffer Amp. P.C.B. Ass'y (except for Japan))	(1)
10	BA05435A	Illumination Lamp Ass'y	1
11	0B70029A	Leaf Switch	1
12	0H04474B	Illuminator Cover	1
13	0B60121A	Control Lamp P.C.B.	1
14	0B90030A	Lamp 14V 65mA	3
15	0H04670B	Illuminator B	1
16	0J04851C	Front Chassis	1
17	0J04853A	Spacer	1
18	BA05422A	Volume P.C.B. Ass'y TD-500 & TD-500E	1
	BA05466A	Volume P.C.B. Ass'y TD-500D	1
19	0J04887B	Motor P.C.B. Insulator	1
20	BA05413B	Motor P.C.B. Ass'y	1
21	CA08713A	Transport Mechanism Ass'y (Serial No.: C60405146 - (TD-500 & TD-500E)) (Serial No.: C60601390 - (TD-500D))	1
	CA08662B	Transport Mechanism Ass'y (Serial Nos.: C60401001 - 05145 (TD-500 & TD-500E)) (Serial Nos.: C60601001 - 01389 (TD-500D))	1
22	0J04892A	Cushion A	3
23	BA05612A	Tone Volume P.C.B. Ass'y (Serial No.: C60406001 - (TD-500 & TD-500E)) (Serial No.: C60601390 - (TD-500D))	1
	BA05420A	Tone Volume P.C.B. Ass'y (Serial Nos.: C60401001 - 06000 (TD-500 & TD-500E)) (Serial Nos.: C60601001 - 01389 (TD-500D))	1
24	0J04873B	Sleeve Lock Plate (except for Japan)	2
25	0J04864A	Sleeve Stopper (except for Japan)	2
26	0H04449E	Main Chassis	1
27	0J04890A	Arm Protector	1
28	BA05415A	Control P.C.B. Ass'y	1
29	0J04856A	Cable Holder	1
30	0H04450F	Top Cover	1
31	0J04859B	Hold Screw (except for Japan)	1
32	0J04870A	Rubber Cap (except for Japan)	1
33	0J04852D	Mounting Sleeve (except for Japan)	1
34	0J04885B	Amp. P.C.B. Insulator	1
35	BA05610A	Amp. P.C.B. Ass'y (Serial No.: C60406001 - (TD-500 & TD-500E)) (Serial No.: C60601390 - (TD-500D))	1
	BA05417B	Amp. P.C.B. Ass'y (Serial Nos.: C60401001 - 06000 (TD-500 & TD-500E)) (Serial Nos.: C60601001 - 01389 (TD-500D))	1
36	0J04886B	Tuner P.C.B. Insulator	1
37	BA05423A	Tuner P.C.B. Ass'y TD-500 (Japan)	1
	BA05424B	Tuner P.C.B. Ass'y TD-500 (U.S.A. & Canada)	1
	BA05458A	Tuner P.C.B. Ass'y TD-500 (Australia & Others), TD-500E & TD-500D	1
38	0J04882B	Insulator A	1
39	BA05615A	Logic P.C.B. Ass'y TD-500 (Japan) (Serial No.: C60405146 -)	1
	BA05616A	Logic P.C.B. Ass'y TD-500 (U.S.A. & Canada) (Serial No.: C60405146 -)	1
	BA05617A	Logic P.C.B. Ass'y TD-500 (Australia & Others) & TD-500E) (Serial No.: C60405146 -)	1
	BA05621A	Logic P.C.B. Ass'y TD-500D (Serial No.: C60601390 -)	1
	BA05406A	Logic P.C.B. Ass'y TD-500 (Japan) (Serial Nos.: C60401001 - 05145)	1
	BA05426A	Logic P.C.B. Ass'y TD-500 (U.S.A. & Canada) (Serial Nos.: C60401001 - 05145)	1
	BA05449A	Logic P.C.B. Ass'y TD-500 (Australia & Others) & TD-500E (Serial Nos.: C60401001 - 05145)	1
	BA05450A	Logic P.C.B. Ass'y TD-500D (Serial Nos.: C60601001 - 01389) (Logic P.C.B. Ass'y includes the following)	1
40	(BA05501A)	(Line Filter P.C.B. Ass'y)	(1)
41	(BA05497A)	(Transistor P.C.B. Ass'y)	(1)
42	(0B81268B)	(4P Terminal TD-500 & TD-500E)	(1)
	(0B81272B)	(4P Terminal TD-500D)	(1)
43	0J04898A	Tuner Insulator B	1
44	0B81270A	Antenna Cable	1
45	0J04883D	Insulator B	1
46	0J04860B	Stud	1
47	0H04451G	Bottom Cover	1
48	0J04896A	Heat Sink Sheet	2
49	0J04897B	Illuminator B Sheet	1
50	0B90021A	Band EG-9	1
51	0J04974C	Insulator C	2
52	0J04895C	Wire Supporter	1
53	0J04899A	Cushion B	1
—	0B41023A	Ceramic Capacitor 0.022μ 25V (TD-500)	1
L01	0E03203A	ST2.6x5 ⊕ Binding	12
L02	0E03204A	ST2x4 ⊕ Binding	8
L03	0E00124A	M2x4 ⊕ Pan	1
L04	0E03213A	ST2x4 ⊕ Countersunk	4
L05	0E00533A	M3x5 ⊕ Countersunk	2
L06	0E03072A	M2.6x6 ⊕ Binding	2
L07	0E00007A	M2.6x5 ⊕ Countersunk	1
L08	0E00791A	M2.6x5 ⊕ Binding	5
L09	—	Nut	(1)
L10	—	Washer	(1)
L11	0E03240A	Nut Hex. M7	1
L12	0E03244A	M2x4 ⊕ Flat	2
L13	0E03219A	ST2.6x6 ⊕ Binding	4

7.2. Front Panel Ass'y (A01)

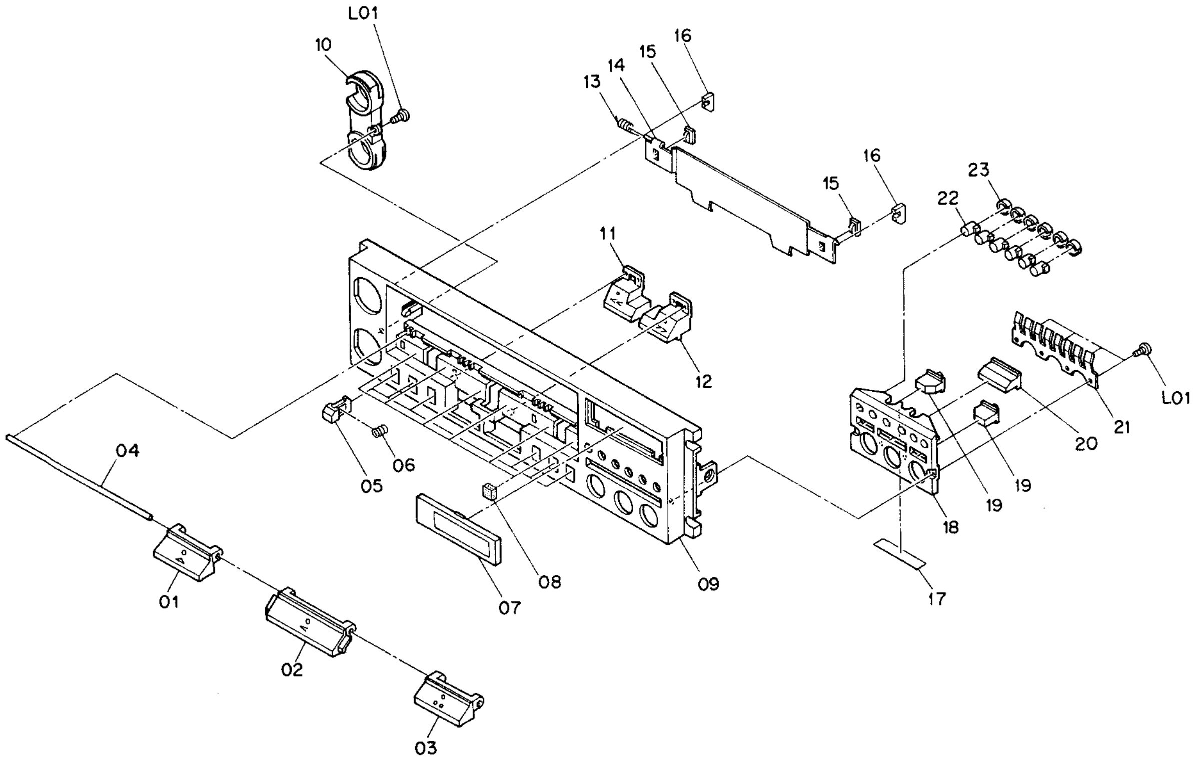


Fig. 7.2

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
A01	HA04773A	Front Panel Ass'y TD-500	1	A01	HA04676C	Front Panel Ass'y TD-500	1
	HA04774A	Front Panel Ass'y TD-500E	1		HA04678C	Front Panel Ass'y TD-500E	1
	HA04777A	Front Panel Ass'y TD-500D	1		HA04680C	Front Panel Ass'y TD-500D	1
		Serial No.: C60404001 -				Serial Nos.: C60401001 - 04000	
		C60601301 -				C60601001 - 01300	
01	HA04709A	Eject Button Ass'y	1	01	HA04709A	Eject Button Ass'y	1
02	HA04708A	Play Button Ass'y	1	02	HA04708A	Play Button Ass'y	1
03	HA04710A	Pause Button Ass'y	1	03	HA04710A	Pause Button Ass'y	1
04	0J04868A	Shaft	1	04	0J04868A	Shaft	1
05	HA04788A	Push Button Ass'y	6	05	HA04788A	Push Button Ass'y	6
06	0J04849A	Push Button Spring	6	06	0J04849A	Push Button Spring	6
07	0H04460B	LCD Lens	1	07	0H04460A	LCD Lens	1
08	0J04878A	Cushion	6	08	0J04878A	Cushion	6
09	0H04494C	Front Panel	1	09	0H04494C	Front Panel	1
10	0H04462B	Illuminator C	1	10	0H04462B	Illuminator C	1
11	HA04711A	FF Button Ass'y	1	11	HA04711A	FF Button Ass'y	1
12	HA04712A	Rewind Button Ass'y	1	12	HA04712A	Rewind Button Ass'y	1
13	0J04850B	Spring	1	13	0J04850B	Spring	1
14	0H04490C	Tape Slot Cover TD-500	1	14	0H04490C	Tape Slot Cover TD-500	1
	0H04504C	Tape Slot Cover TD-500E	1		0H04504C	Tape Slot Cover TD-500E	1
	0H04507C	Tape Slot Cover TD-500D	1		0H04507C	Tape Slot Cover TD-500D	1
15	0H04463C	Tape Slot Cover Protector	2	15	0H04463C	Tape Slot Cover Protector	2
16	0J04902A	Guide	2	16	0J04902A	Guide	2
17	0J04891A	Sheet	1	17	0J04891A	Sheet	1
18	0H04468B	Illuminator D	1	18	0H04468A	Illuminator D	1
19	0H04483A	Up/Down Button	2	19	0H04483A	Up/Down Button	2
20	0H04481A	Scan Button	1	20	0H04481A	Scan Button	1
21	0J04847A	Button Spring	1	21	0J04847A	Button Spring	1
22	0H04473A	Station Button	6	22	0H04473A	Station Button	6
23	0J04846B	Reflector	6	23	0J04846B	Reflector	6
L01	0E00961A	BT2x5 ⊕Binding	5	L01	0E00961A	BT2x5 ⊕Binding	5

7.3. Transport Mechanism Ass'y (A02)

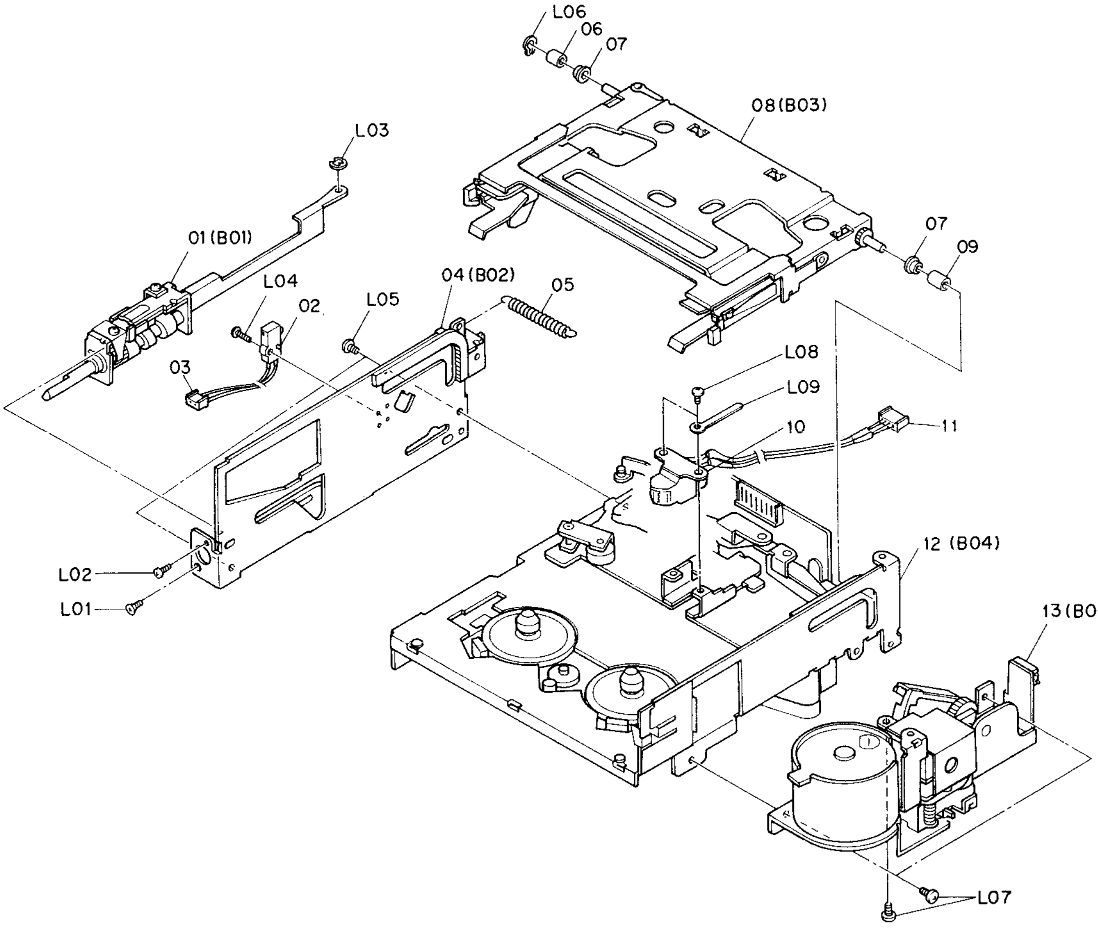


Fig. 7.3

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
A02	CA08713A	Transport Mechanism Ass'y Serial No.: C60405146 - C60601390 -	1	A02	CA08662B	Transport Mechanism Ass'y Serial Nos.: C60401001 - 05145 C60601001 - 01389	1
01	CA08687A	Azimuth Controller Ass'y	1	01	CA08687A	Azimuth Controller Ass'y	1
02	0B70028A	Eject Switch	1	02	0B70028A	Eject Switch	1
03	0B82299B	2P Coupler	1	03	0B82299B	2P Coupler	1
04	CA08686A	Side Chassis Ass'y	1	04	CA08686A	Side Chassis Ass'y	1
05	0C08868A	Spring A	1	05	0C08868A	Spring A	1
06	0C08799A	Guide Collar B	1	06	0C08799A	Guide Collar B	1
07	0C08797A	Guide Roller A	2	07	0C08797A	Guide Roller A	2
08	CA08665A	Cassette Holder Ass'y	1	08	CA08665A	Cassette Holder Ass'y	1
09	0C08798A	Guide Collar C	1	09	0C08798A	Guide Collar C	1
10	GA02203B	P2C-3L Playback Head	1	10	GA02203B	P2C-3L Playback Head	1
11	0B82302A	4P-H Connector	1	11	0B82302A	4P-H Connector	1
12	CA08714A	Transport Mechanism Sub Ass'y	1	12	CA08664A	Transport Mechanism Sub Ass'y	1
13	CA08667A	Loading Mechanism Ass'y	1	13	CA08667A	Loading Mechanism Ass'y	1
L01	0E03189A	M2x3 ⊕Countersunk (Black Chromate)	1	L01	0E03189A	M2x3 ⊕Countersunk (Black Chromate)	1
L02	0E03216A	M1.4x2.5 ⊕Pan (Black Chromate)	1	L02	0E03216A	M1.4x2.5 ⊕Pan (Black Chromate)	1
L03	0E00222A	E-Ring 2mm	1	L03	0E00222A	E-Ring 2mm	1
L04	0E03185A	M1.7x6 ⊕Pan	1	L04	0E03185A	M1.7x6 ⊕Pan	1
L05	0E03186A	M2.6x2.8 ⊕Pan (Black Chromate)	2	L05	0E03186A	M2.6x2.8 ⊕Pan (Black Chromate)	2
L06	0E00839A	Grip 2.5mm	1	L06	0E00839A	Grip 2.5mm	1
L07	0E00120A	M2.6x3 ⊕Pan (Black Chromate)	3	L07	0E00120A	M2.6x3 ⊕Pan (Black Chromate)	3
L08	0E00783A	M2x3 ⊕Pan (Black Chromate)	2	L08	0E00783A	M2x3 ⊕Pan (Black Chromate)	2
L09	0C08858A	Wire Clamper	1	L09	0C08858A	Wire Clamper	1

7.4. Azimuth Controller Ass'y (B01)

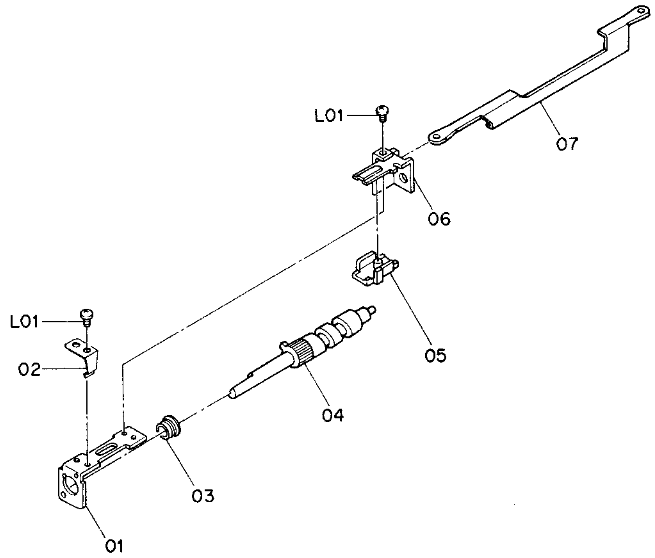


Fig. 7.4

7.5. Side Chassis Ass'y (B02)

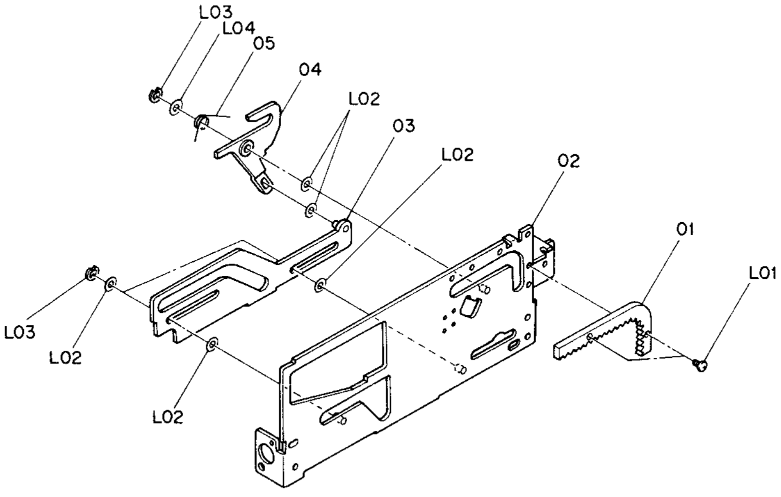


Fig. 7.5

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
B01	CA08687A	Azimuth Controller Ass'y Serial No.: C60401001 - C60601001 -	1	B02	CA08686A	Side Chassis Ass'y Serial No.: C60401001 - C60601001 -	1
01	0C08850B	Azimuth Cam Holder A	1	01	0C08828B	Rack Rail L	
02	0C08856A	Plate Spring	1	02	CA08685A	Side Chassis L Ass'y	1
03	0C08896A	Cam Holder	1	03	CA08643B	G-Shaped Plate Ass'y	1
04	0C08777B	Azimuth Cam B	1	04	CA08644A	Slide Arm Ass'y	1
05	0C08854A	Joint Pin	1	05	0C08876A	Slide Arm Spring	1
06	0C08851B	Azimuth Cam Holder B	1	L01	0E03183A	M1.7x2.2 ⊕Pan (Black Chromate)	2
07	0C08853A	Joint Bar	1	L02	0E03062A	Mylar Washer 2.6mm 2.6x5x0.25	6
L01	0E00922A	M2x3 ⊕Pan (Black Chromate)	2	L03	0E00222A	E-Ring 2mm	3
				L04	0E03180A	Mylar Washer 2.6mm 2.6x6x0.25	1

7.6. Cassette Holder Ass'y (B03)

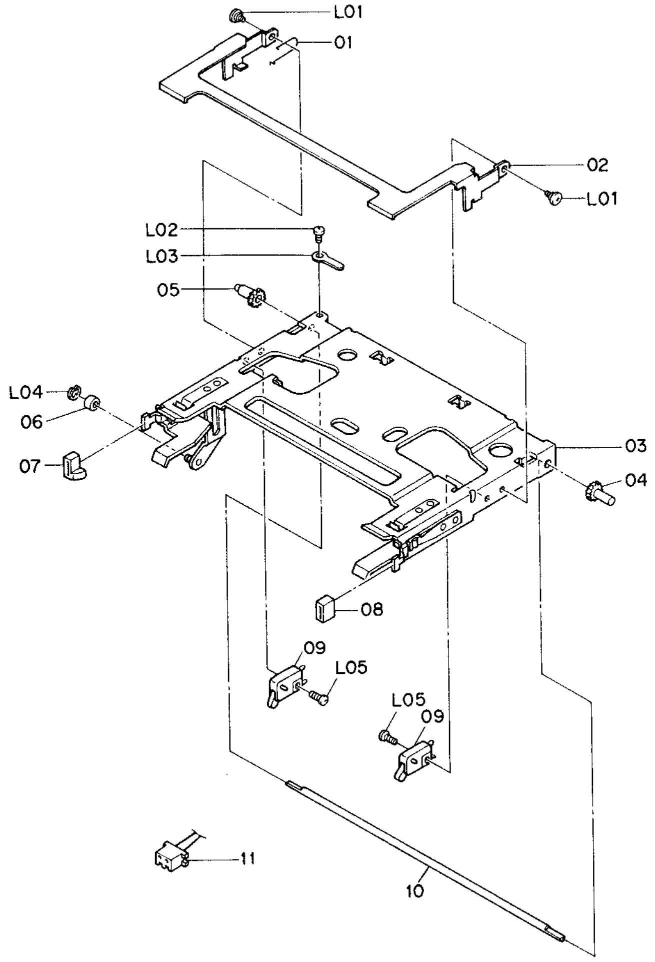
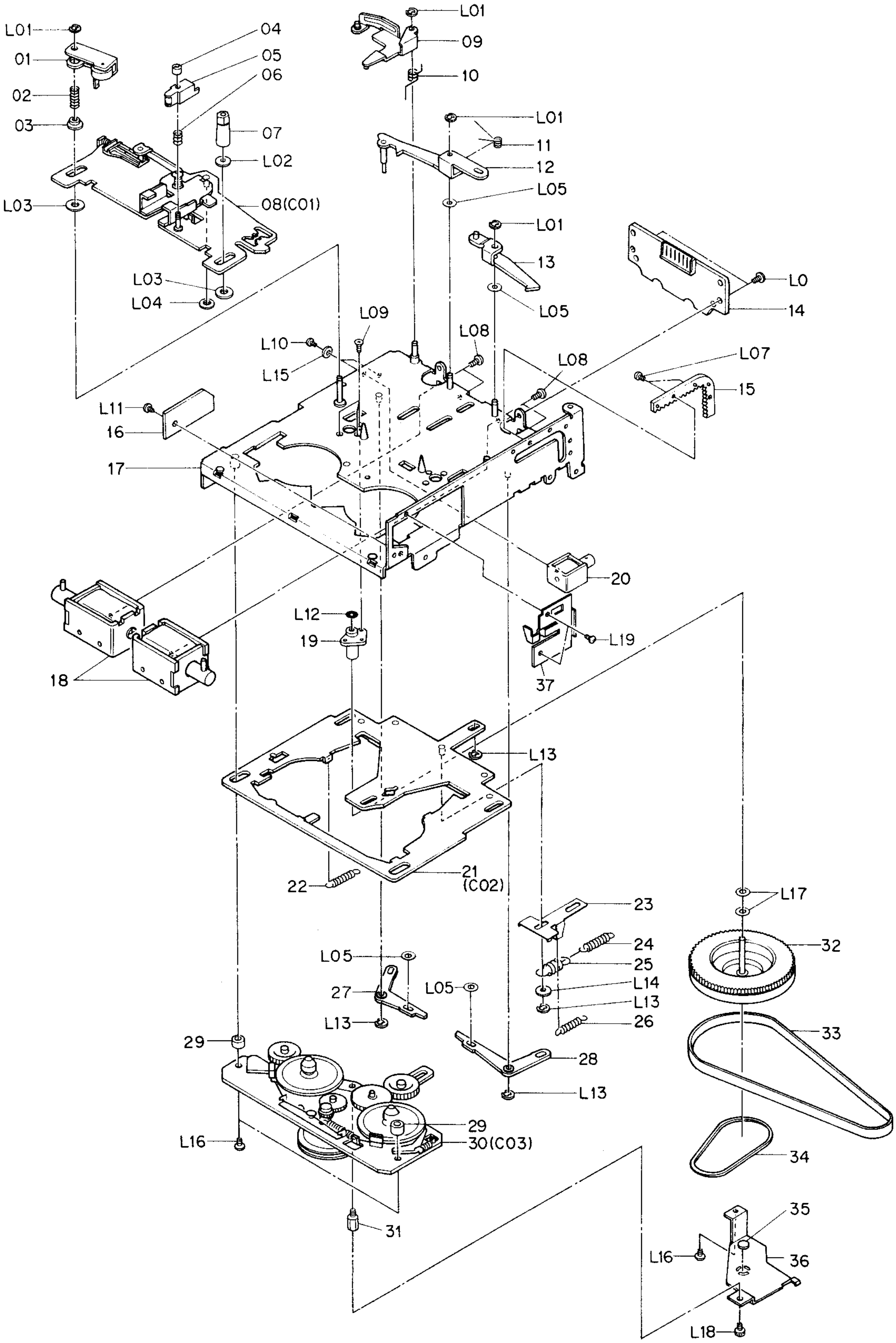


Fig. 7.6

Schematic Ref. No.	Part No.	Description	Q'ty
B03	CA08665A	Cassette Holder Ass'y Serial No.: C60401001 - C60601001 -	1
01	0C08890C	Plate Spring	1
02	0C08860F	Plate	1
03	CA08674D	Cassette Holder Sub Ass'y	1
04	0C08847A	Pinion Gear R	1
05	0C08846A	Pinion Gear L	1
06	0C08786A	Roller 1.5x4x2.5	1
07	0C08888B	Cassette Guide L	1
08	0C08887B	Cassette Guide R	1
09	0B70001A	Leaf Switch	2
10	0C08800B	Pinion Shaft	1
11	0B82301A	2P Coupler	1
L01	0E03208A	M1.4x2.55 ⊕	2
L02	0E03190A	ST1.7x3 ⊕Pan (Black Chromate)	1
L03	0E00905A	Earth Lug 2mm	1
L04	0E00165A	E-Ring 1.2mm	1
L05	0E03184A	M1.7x5.5 ⊕Pan (Black Chromate)	2

7.7. Transport Mechanism Sub Ass'y (B04)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30(C03)
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L18

Fig. 7.7

Schematic Ref. No.	Part No.	Description	Q'ty
B04	**CA08714A**	**Transport Mechanism Sub Ass'y** Serial No.: C60405146 - C60601390 -	1
01	CA08617B	Take-up Pressure Roller Arm Ass'y	1
02	0C08878A	Pressure Roller Adjust Spring	1
03	0C08689A	Roller Arm Sleeve	1
04	0C08399C	Tape Guide Height Adjust Nut	1
05	0C08755B	Tape Guide	1
06	0C08885A	Tape Guide Spring	1
07	0C08825A	Stud	1
08	CA08679A	Head Slider Ass'y	1
09	CA08656A	Azimuth Arm Ass'y	1
10	0C08891A	Azimuth Arm Spring	1
11	0C08867A	Lock Plate Spring	1
12	CA08622D	Play Lock Plate Ass'y	1
13	CA08623C	Rew Lock Plate Ass'y	1
14	BA05430A	Solenoid P.C.B. Ass'y	1
15	0C08829B	Rack Gear	1
16	0C08817B	Guide Plate	1
17	CA08657F	Mechanism Chassis Ass'y	1
18	0B90027B	Main Solenoid	2
19	CA08629A	Take-up Flange Metal Ass'y	1
20	0B90028B	Lock Solenoid	1
21	CA08678A	Master Plate Ass'y	1
22	0C08998A	Take-up Pressure Roller Spring	1
23	0C08679D	Centering Plate	1
24	0C08881A	Control Plate Spring	1
25	0C08880B	Head Base Spring	1
26	0C08877A	Centering Spring	1
27	CA08612B	Solenoid Arm L Ass'y	1
28	CA08613B	Solenoid Arm R Ass'y	1
29	0C08703A	Slide Base Collar	2
30	CA08715A	Reel Mechanism Ass'y	1
31	0C08807A	Thrust Stud	1
32	CA08609C	Take-up Flywheel Ass'y	1
33	0C08782A	Capstan Belt	1
34	0C08783A	V Pulley Belt	1
35	0C08692A	Thrust Plate	1
36	0C08751A	Flywheel Plate	1
37	0J04901B	Cover Plate	1
L01	0E00042A	E-Ring 1.5mm	4
L02	0E03191A	Washer 2.5x6.5x0.5	1
L03	0C08826C	Slide Washer A	2
L04	0C08827B	Slide Washer B	1
L05	0E03196A	Mylar Washer 2.6mm 2.6x5x0.125	4
L06	0E03197A	M2.6x4 ⊕Pan (Black Chromate)	2
L07	0E03183A	M1.7x2.2 ⊕Pan (Black Chromate)	2
L08	0E03241A	M3x4 ⊕Binding	4
L09	0E03189A	M2x3 ⊕Countersunk (Black Chromate)	3
L10	0E03246A	M1.6x3 ⊕Pan (Black Chromate)	2
L11	0E03186A	M2.6x2.8 ⊕Pan (Black Chromate)	1
L12	0E03200A	Nylon Washer 2mm 2.0x3.5x0.13	1
L13	0E00222A	E-Ring 2mm	4
L14	0E03206A	Nylon Washer 3.1mm 3.1x6x0.5	1
L15	0E03199A	Washer 1.8x3.8x0.3 (Nickel)	2
L16	0E00120A	M2.6x3 ⊕Pan	3
L17	0E03062A	Mylar Washer 2.6mm 2.6x5x0.25	2
L18	0E03242A	M2.6x3 Hex. Socket Head	1
L19	0E03243A	M2x2.5 ⊕Pan	2

Schematic Ref. No.	Part No.	Description	Q'ty
B04	**CA08664A**	**Transport Mechanism Sub Ass'y** Serial Nos.: C60401001 - 05145 C60601001 - 01389	1
01	CA08617B	Take-up Pressure Roller Arm Ass'y	1
02	0C08878A	Pressure Roller Adjust Spring	1
03	0C08689A	Roller Arm Sleeve	1
04	0C08399C	Tape Guide Height Adjust Nut	1
05	0C08755B	Tape Guide	1
06	0C08885A	Tape Guide Spring	1
07	0C08825A	Stud	1
08	CA08679A	Head Slider Ass'y	1
09	CA08656A	Azimuth Arm Ass'y	1
10	0C08891A	Azimuth Arm Spring	1
11	0C08867A	Lock Plate Spring	1
12	CA08622D	Play Lock Plate Ass'y	1
13	CA08623C	Rew Lock Plate Ass'y	1
14	BA05430A	Solenoid P.C.B. Ass'y	1
15	0C08829B	Rack Gear	1
16	0C08817B	Guide Plate	1
17	CA08657F	Mechanism Chassis Ass'y	1
18	0B90027B	Main Solenoid	2
19	CA08629A	Take-up Flange Metal Ass'y	1
20	0B90028B	Lock Solenoid	1
21	CA08678A	Master Plate Ass'y	1
22	0C08998A	Take-up Pressure Roller Spring	1
23	0C08679D	Centering Plate	1
24	0C08881A	Control Plate Spring	1
25	0C08880B	Head Base Spring	1
26	0C08877A	Centering Spring	1
27	CA08612B	Solenoid Arm L Ass'y	1
28	CA08613B	Solenoid Arm R Ass'y	1
29	0C08703A	Slide Base Collar	2
30	CA08680A	Reel Mechanism Ass'y	1
31	0C08807A	Thrust Stud	1
32	CA08609C	Take-up Flywheel Ass'y	1
33	0C08782A	Capstan Belt	1
34	0C08783A	V Pulley Belt	1
35	0C08692A	Thrust Plate	1
36	0C08751A	Flywheel Plate	1
37	0J04901B	Cover Plate	1
L01	0E00042A	E-Ring 1.5mm	4
L02	0E03191A	Washer 2.5x6.5x0.5	1
L03	0C08826C	Slide Washer A	2
L04	0C08827B	Slide Washer B	1
L05	0E03196A	Mylar Washer 2.6mm 2.6x5x0.125	4
L06	0E03197A	M2.6x4 ⊕Pan (Black Chromate)	2
L07	0E03183A	M1.7x2.2 ⊕Pan (Black Chromate)	2
L08	0E03241A	M3x4 ⊕Binding	4
L09	0E03189A	M2x3 ⊕Countersunk (Black Chromate)	3
L10	0E03246A	M1.6x3 ⊕Pan (Black Chromate)	2
L11	0E03186A	M2.6x2.8 ⊕Pan (Black Chromate)	1
L12	0E03200A	Nylon Washer 2mm 2.0x3.5x0.13	1
L13	0E00222A	E-Ring 2mm	4
L14	0E03206A	Nylon Washer 3.1mm 3.1x6x0.5	1
L15	0E03199A	Washer 1.8x3.8x0.3 (Nickel)	2
L16	0E00120A	M2.6x3 ⊕Pan	3
L17	0E03062A	Mylar Washer 2.6mm 2.6x5x0.25	2
L18	0E03242A	M2.6x3 Hex. Socket Head	1
L19	0E03243A	M2x2.5 ⊕Pan	2

7.8. Loading Mechanism Ass'y (B05)

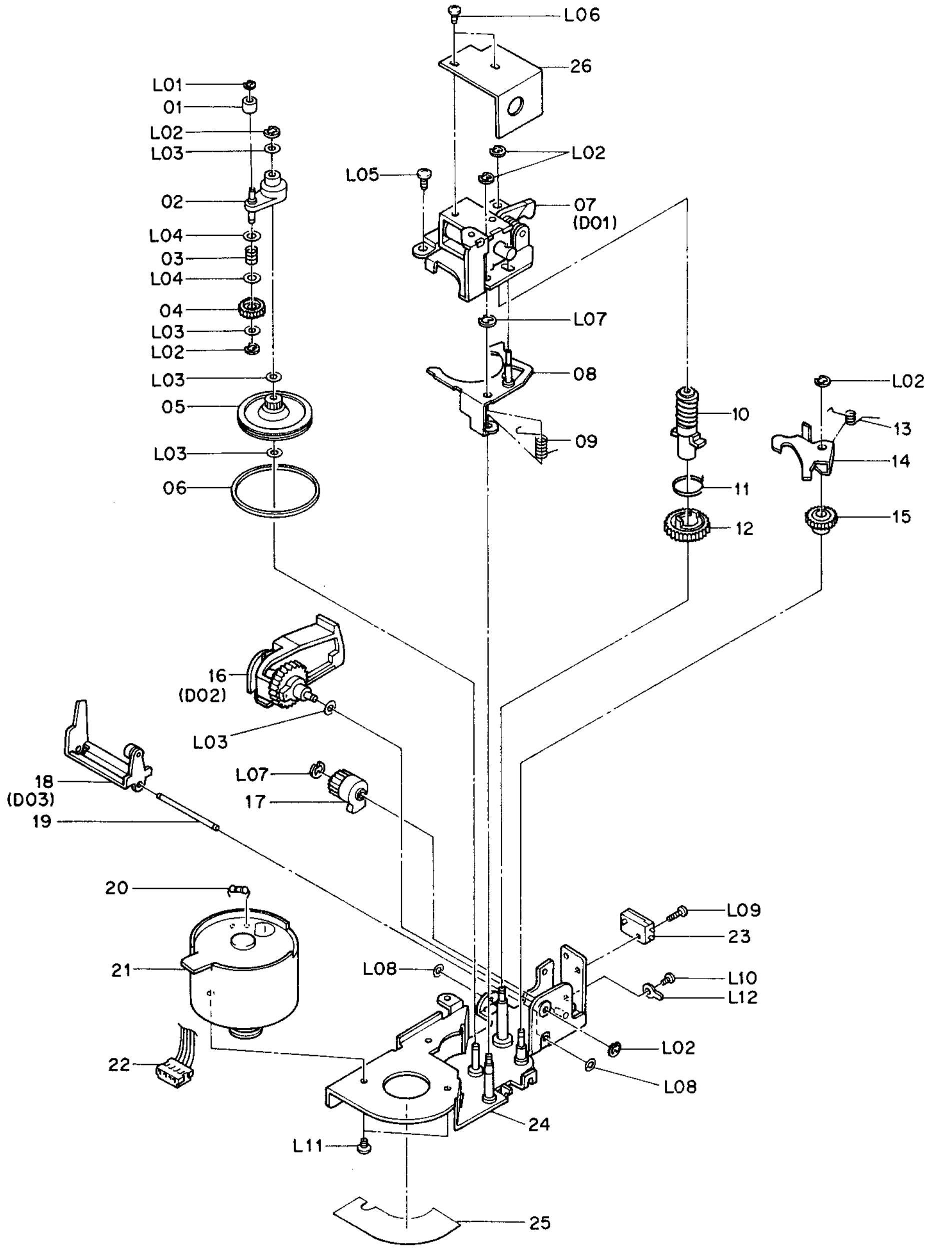
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Fig. 7.8

Schematic Ref. No.	Part No.	Description	Q'ty
B05	BA08667A	**Loading Mechanism Ass'y** Serial No.: C60401001 - C60601001 -	1
01	0C08812A	Idler Roller L	1
02	CA08655B	P Arm L Ass'y	1
03	0C08872A	Function Spring	1
04	0C08840D	Idle Gear L	1
05	0C08842B	Loading Pulley	1
06	0C08784B	Loading Belt	1
07	CA08677A	Solenoid Plate Ass'y	1
08	CA08654B	Eject Arm Ass'y	1
09	0C08874A	Eject Arm Spring	1
10	0C08844C	Worm Gear	1
11	0C08873B	Flexible Spring	1
12	0C08839B	Loading Gear A	1
13	0C08871A	Loading Arm Spring C	1
14	0C08831B	Loading Arm C	1
15	0C08841B	Eject Gear	1
16	CA08675A	Loading Arm Ass'y	1
17	0C08789B	Head Base Cam Gear	1
18	CA08676A	Head Base Arm Ass'y	1
19	0C08793A	Head Base Arm Shaft	1
20	0B09629A	Carbon Resistor 10K 1/6W J	1
21	CA08652B	Main Motor Ass'y	1
22	0B82308A	4P-H Connector	1
23	0B70001A	Loading Switch	1
24	CA08653C	Motor Chassis Ass'y	1
25	0J04893A	Tone Volume Insulator	1
26	0C08893B	Solenoid Protector	1
L01	0E03182A	E-Ring 0.8mm	1
L02	0E00042A	E-Ring 1.5mm	6
L03	0E03061A	Mylar Washer 2.1mm 2.1x4x0.25	5
L04	0E03209A	Mylar Washer 3.1mm 3.1x4.9x0.125	2
L05	0E00226A	M2.6x4 ⊕Pan	1
L06	0E00922A	M2x3 ⊕Pan	2
L07	0E00222A	E-Ring 2mm	2
L08	0E03181A	Mylar Washer 1.6mm 1.6x3.5x0.25	2
L09	0E03185A	M1.7x6 ⊕Pan (Black Chromate)	1
L10	0E03183A	M1.7x2.2 ⊕Pan (Black Chromate)	1
L11	0E03186A	M2.6x2.8 ⊕Pan (Black Chromate)	2
L12	0E00905A	Earth Lug B	1
C01	CA08679A	**Head Slider Ass'y** Serial No.: C60401001 - C60601001 -	1
01	0C08879A	Head Hold Spring	1
02	0C08688B	Azimuth Screw	1
03	0C08749B	Head Mount Plate	1
04	0C08466A	Slide Cam Spring	1
05	0C08708A	Azimuth Adjust Plate	1
06	CA08635D	Head Base Ass'y	1
L01	0E00042A	E-Ring 1.5mm	1
L02	0E03191A	Washer 2.5mm 2.5x6.5x0.5	2
L03	0E03272A	PL1.7x3.5 ⊕Pan	1
C02	CA08678A	**Master Plate Ass'y** Serial No.: C60401001 - C60601001 -	1
01	CA08632E	Control Plate Ass'y	1
02	CA08615A	RF Selector Arm R Ass'y	1
03	CA08614A	FR Selector Arm L Ass'y	1
04	0C08705A	Drive Pin	1
05	0C08678A	FR Selector Plate	1
06	0C08882A	FF Limiter Spring	1
L01	0E00222A	E-Ring 2mm	2
L02	0E03196A	Mylar Washer 2.6mm 2.6x5x0.125	2
L03	0E00042A	E-Ring 1.5mm	1

7.9. Head Slider Ass'y (C01)

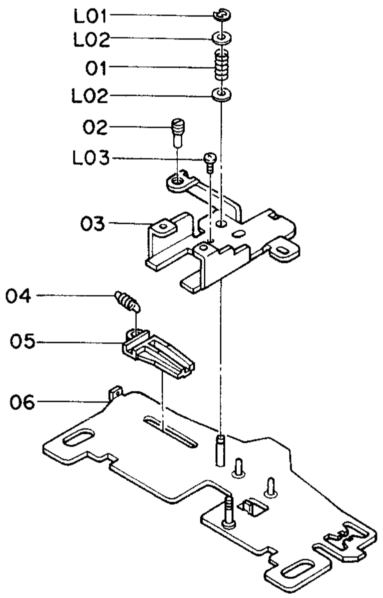

Fig. 7.9

7.10. Master Plate Ass'y (C02)

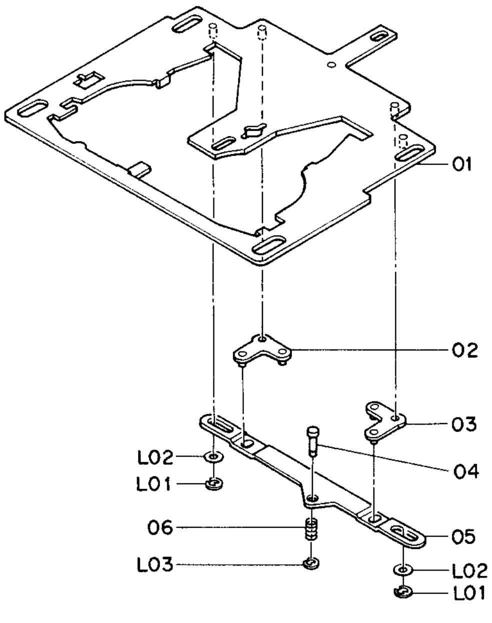

Fig. 7.10

7.11. Reel Mechanism Ass'y (C03)

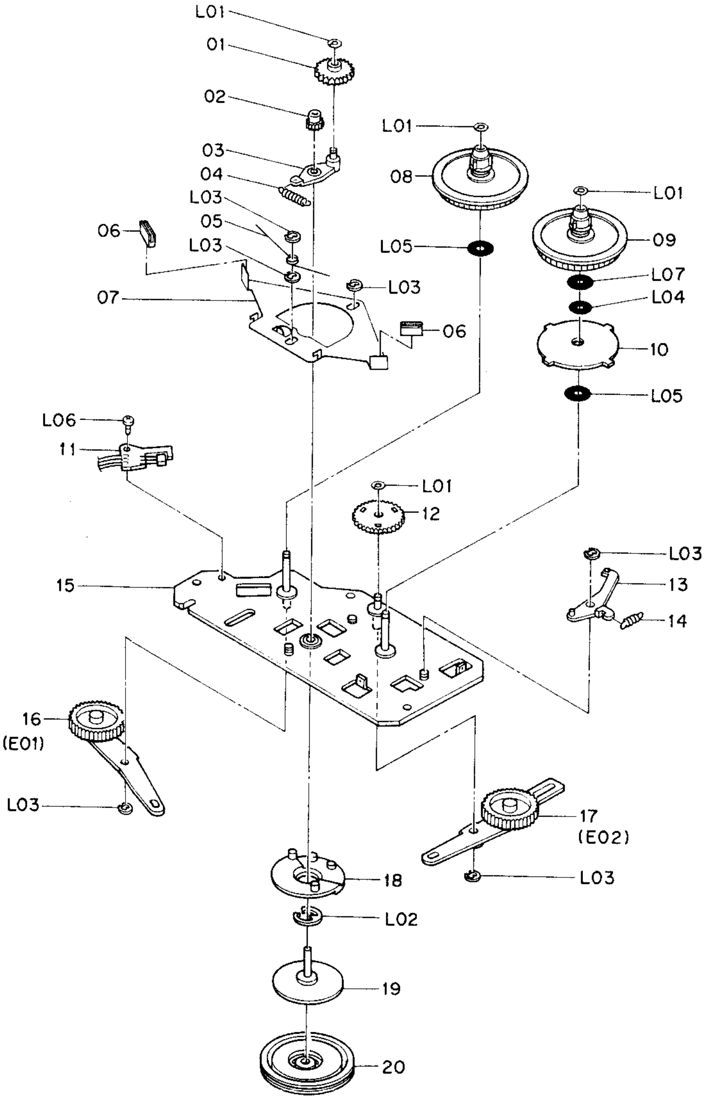
L01
01
02
03
04
L03
05
L03
06
07
L01
08
L05
L01
09
L07
L04
10
L05
L03
06
L06
11
L01
12
L03
13
14
15
16
(E01)
L03
17
(E02)
L03
18
L02
19
20

Fig. 7.11

7.12. Solenoid Plate Ass'y (D01)

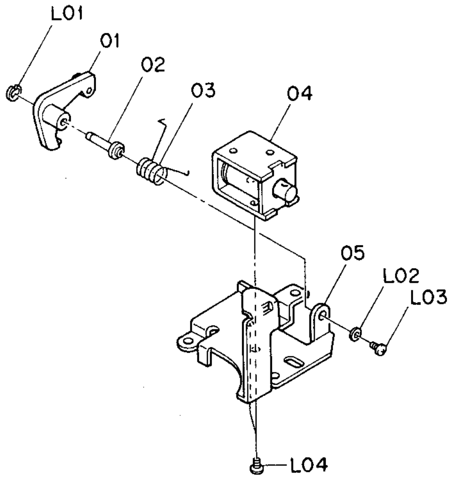
L01
01
02
03
04
05
L02
L03
L04

Fig. 7.12

7.13. Loading Arm Ass'y (D02)

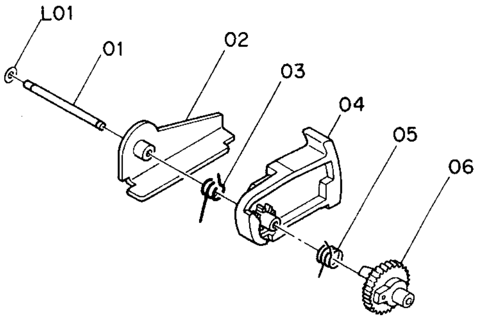
L01
01
02
03
04
05
06

Fig. 7.13

7.14. Head Base Arm Ass'y (D03)

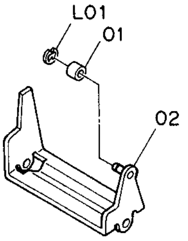

Fig. 7.14

7.15. FF Arm Ass'y (E01)

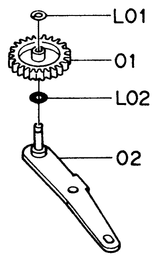

Fig. 7.15

7.16. Rewind Arm Ass'y (E02)

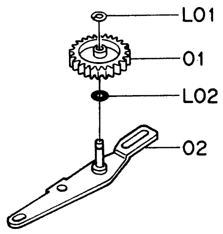

Fig. 7.16

Schematic Ref. No.	Part No.	Description	Q'ty
C03	CA08715A	Reel Mechanism Ass'y Serial No.: C60405146 - C60601390 -	1
01	0C08727A	Idler Gear	1
02	0C08676B	Pinion Gear	1
03	CA08627B	Pivot Suspension Arm Ass'y	1
04	0C08866A	Pivot Suspension Arm Spring	1
05	0C08864B	Brake Spring	1
06	0C08690A	Brake Shoe	2
07	0C08723B	RB Plate	1
08	CA08639F	Take-up Reel Hub Ass'y	1
09	CA08640F	Supply Reel Hub Ass'y	1
10	0C08743A	Back Tension Disc	1
11	BA05614B	Shut-off P.C.B. Ass'y	1
12	0C08729B	Idler Gear	1
13	0C08709A	Back Tension Arm	1
14	0C08865A	Back Tension Arm Spring	1
15	CA08634D	Reel Chassis Ass'y	1
16	CA08672A	FF Arm Ass'y	1
17	CA08671A	Rewind Arm Ass'y	1
18	0C08778A	FR Drum	1
19	CA08631A	Clutch Disc Ass'y	1
20	CA08673A	Magnet Clutch Pulley Ass'y	1
L01	0E03181A	Mylar Washer 1.6mm 1.6x3.5x0.25	4
L02	0E00104A	E-Ring 5mm	1
L03	0E00042A	E-Ring 1.5mm	6
L04	0E03195A	Nylon Washer 3.6mm 3.6x6x0.25	1
L05	0E03193A	Nylon Washer 2.1mm 2.1x7x0.25	2
L06	0E00922A	M2x3 ⊕Pan	1
L07	0E03239A	Nylon Washer 3.6mm 3.6x7x0.13	1
C03	CA08680A	Reel Mechanism Ass'y Serial Nos.: C60401001 - 05145 C60601001 - 01389	1
01	0C08727A	Idler Gear	1
02	0C08676B	Pinion Gear	1
03	CA08627B	Pivot Suspension Arm Ass'y	1
04	0C08866A	Pivot Suspension Arm Spring	1
05	0C08864B	Brake Spring	1
06	0C08690A	Brake Shoe	2
07	0C08723B	RB Plate	1
08	CA08639F	Take-up Reel Hub Ass'y	1
09	CA08640F	Supply Reel Hub Ass'y	1
10	0C08743A	Back Tension Disc	1
11	BA05429A	Shut-off P.C.B. Ass'y	1
12	0C08729B	Idler Gear	1
13	0C08709A	Back Tension Arm	1
14	0C08865A	Back Tension Arm Spring	1
15	CA08634D	Reel Chassis Ass'y	1
16	CA08672A	FF Arm Ass'y	1
17	CA08671A	Rewind Arm Ass'y	1
18	0C08778A	FR Drum	1
19	CA08631A	Clutch Disc Ass'y	1
20	CA08673A	Magnet Clutch Pulley Ass'y	1
L01	0E03181A	Mylar Washer 1.6mm 1.6x3.5x0.25	4
L02	0E00104A	E-Ring 5mm	1
L03	0E00042A	E-Ring 1.5mm	6
L04	0E03195A	Nylon Washer 3.6mm 3.6x6x0.25	1
L05	0E03193A	Nylon Washer 2.1mm 2.1x7x0.25	2
L06	0E00922A	M2x3 ⊕Pan	1
L07	0E03239A	Nylon Washer 3.6mm 3.6x7x0.13	1

Schematic Ref. No.	Part No.	Description	Q'ty
D01	CA08677A	Solenoid Plate Ass'y Serial No.: C60401001 - C60601001 -	1
01	0C08834B	Stop Arm L	1
02	0C08838A	Stop Arm Shaft	1
03	0C08875A	Stop Arm Spring	1
04	0B90029A	Eject Solenoid	1
05	0C08833A	Solenoid Plate	1
L01	0E00222A	E-Ring 2mm	1
L02	0E03199A	Washer 1.8mm	1
L03	0E03183A	M1.7x2.2 ⊕Pan (Black Chromate)	1
L04	0E00922A	M2x3 ⊕Pan (Black Chromate)	2
D02	CA08675A	Loading Arm Ass'y Serial No: C60401001 - C60601001 -	1
01	0C08795B	Main Shaft L	1
02	CA08645A	Loading Arm B Ass'y	1
03	0C08870A	Loading Arm Spring B	1
04	0C08801B	Loading Arm A	1
05	0C08869C	Loading Arm Spring A	1
06	0C08791B	Loading Gear B	1
L01	0E03181A	Mylar Washer 1.6mm 1.6x3.5x0.25	1
D03	CA08676A	Head Base Arm Ass'y Serial No.: C60401001 - C60601001 -	1
01	0C08786A	Roller 1.5x4x2.5	1
02	CA08642B	Head Base Arm Sub Ass'y	1
L01	0E00165A	E-Ring 1.2mm	1
E01	CA08672A	FF Arm Ass'y Serial No.: C60401001 - C60601001 -	1
01	0C08731A	F Idler A	1
02	CA08626C	FF Arm Sub Ass'y	1
L01	0E03181A	Mylar Washer 1.6mm 1.6x3.5x0.25	1
L02	0E03187A	Nylon Washer FT20 2.1x4.0x0.25	1
E02	CA08671A	Rewind Arm Ass'y Serial No.: C60401001 - C60601001 -	1
01	0C08731A	F Idler A	1
02	CA08624B	Rewind Arm Sub Ass'y	1
L01	0E03181A	Mylar Washer 1.6mm 1.6x3.5x0.25	1
L02	0E03187A	Nylon Washer FT20 2.1x4.0x0.25	1

8. MOUNTING DIAGRAMS AND PARTS LIST

Notes:
1. Mounting diagram shows a dip side view of the printed circuit board.
2. Diode is MA221 or RLS-73 unless otherwise specified.
3. Following transistors are interchangeable with each other.
   2SC945, 2SC536SP, 2SC2458, 2SC2785
4. Abbreviation for part name:
   TR — Transistor, SiD — Silicon Diode, ZD — Zener Diode
   RK — Carbon Resistor, RM — Metal Film Resistor, RF — Fail Safe Type Resistor
   CE — Electrolytic Capacitor, CM — Mylar Capacitor, CC — Ceramic Capacitor, CP — PP Capacitor,
   CT — Tantalum Capacitor

8.1. Line Filter P.C.B. Ass'y

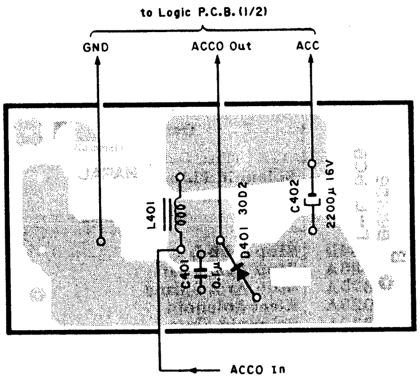
to Logic P.C.B. (1/2)
GND
ACCO Out
ACC
L401
D401 30D2
C402
2200µ 16V
C401
0.1µ
ACCO In

Fig. 8.1

8.2. Transistor P.C.B. Ass'y

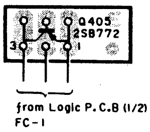
Q405
2SB772
3
1
from Logic P.C.B (1/2)
FC-1

Fig. 8.2

8.3. Shut-off P.C.B. Ass'y

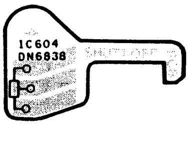
IC604
DN6838

Fig. 8.3

8.4. Lamp P.C.B. Ass'y

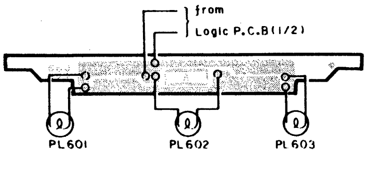
from
Logic P.C.B (1/2)
PL601
PL602
PL603

Fig. 8.4

8.5. Solenoid P.C.B. Ass'y

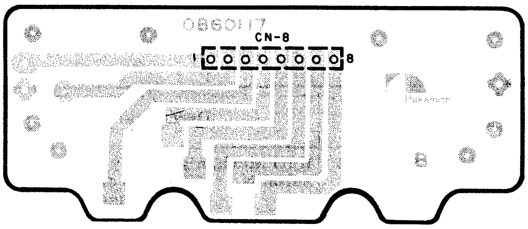
0B60117
CN-8
1
8

Fig. 8.5

Schematic Ref. No.	Part No.	Description
	BA05501A	**Line Filter P.C.B. Ass'y**
	0B60126B	Line Filter P.C.B.
D401	0B06458A	SiD 30D-2
L401	0B06707A	Choke Coil
C401	0B09292A	CC 0.1µ 50V Z
C402	0B09894A	CE 2200µ 16V
	0B80068B	GND Cable (1)
	0B80069A	ACC Cable (1)
	0B90019A	SK Binder (2)
	BA05497A	**Transistor P.C.B. Ass'y**
	0B60123A	Transistor P.C.B.
Q405	0B06303A	TR 2SB772 (P,Q)
FC1	0B82346A	Flat Cable 3P 120mm
	0J04855B	Wire Holder (1)
	0E00507A	Nut Hex. M3 (1)
	0E00510A	M3x8 ⊕Pan (2A) (1)
	BA05614B	**Shut-off P.C.B. Ass'y** Serial No.: C60405146 - C60601390 -
	0B60103B	Shut-off P.C.B.
IC604	0B11062A	Hall IC DN6838
CN9	0B82358A	3P-H Connector 50mm
	BA05429A	**Shut-off P.C.B. Ass'y** Serial Nos.: C60401001 - 05145 C60601001 - 01389
	0B60103A	Shut-off P.C.B.
IC604	0B11062A	Hall IC DN6838
CP3	0B82297B	3P Coupler
	BA05484A	**Lamp P.C.B Ass'y**
	0B60121A	Lamp P.C.B.
PL601,602 603	0B90030A	Lamp 65mA 14V
	0H04670B	Illuminator B (1)
	BA05430A	**Solenoid P.C.B. Ass'y**
	0B60117B	Solenoid P.C.B.
CN8	0B81042A	8P-S Post

8.6. Buffer Amp. P.C.B. Ass'y

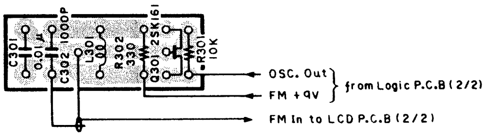
C301
0.01μ
C302
1000P
L301
R302
330
Q301 2SK161
R301
10K
OSC. Out
FM +9V
from Logic P.C.B (2/2)
FM In to LCD P.C.B (2/2)

Fig. 8.6

8.7. Control P.C.B. Ass'y

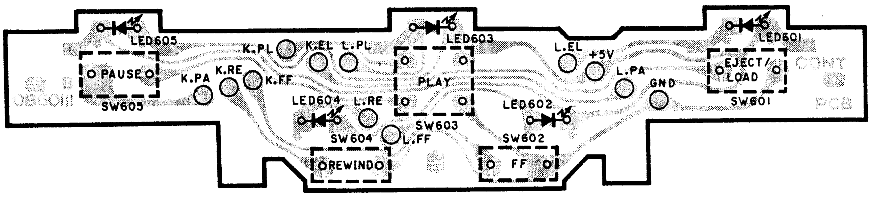
LED605
K.PL
K.EL
L.PL
LED603
L.EL
+5V
LED601
PAUSE
SW605
K.PA
K.RE
K.FF
PLAY
L.PA
GND
EJECT/LOAD
SW601
LED604
L.RE
LED602
SW604
L.FF
SW603
SW602
REWIND
FF
CONT PCB
0B60111

Fig. 8.7

8.8. Volume P.C.B. Ass'y

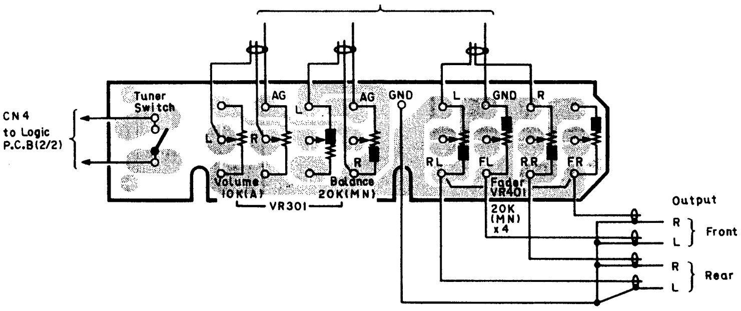
to Amp. P.C.B.
CN4
to Logic P.C.B(2/2)
Tuner Switch
AG
L
R
AG
GND
L
GND
R
RL
FL
RR
FR
Volume 10K(A)
Balance 20K(MN)
VR301
Fader VR401
20K (MN) x4
Output
R
L
Front
R
L
Rear

Fig. 8.8

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
	BA05516A	Buffer Amp. P.C.B. Ass'y (except for Japan)		BA05422A	Volume P.C.B. Ass'y TD-500 & TD-500E
				BA05466A	Volume P.C.B. Ass'y TD-500D
	0B60132A	Buffer Amp. P.C.B.			
Q301	0B06461A	FET 2SK161		0B60115A	Volume P.C.B.
L301	0B51198A	RF Coil		0B30011A	Volume 12mm
R301	0B09701A	RK 10K 1/6W J	CN4	0B82305A	2P-H Connector
R302	0B09665A	RK 330 1/6W J		0B81269B	Pin Jack Cable BLK TD-500 & TD-500E (1)
C301	0B41019A	CC 0.01μ 25V			
C302	0B41007A	CC 1000P 25V		0B81280A	Pin Jack Cable GRY TD-500 & TD-500E (1)
	BA05415A	Control P.C.B. Ass'y		0B81275B	Socket 7P TD-500D (1)
	0B60111B	Control P.C.B.			
LED601-605	0B12215A	LED SLP202C Green		0E03123A	Earth Lug M2.6 (1)
				0B80078B	Shield Wire A (Yellow) (1)
SW601,602 604,605	0B70020A	Tact Switch		0B80079B	Shield Wire B (Red) (1)
SW603	0B70032A	Tact Switch		0B80080B	Shield Wire C (Black) (1)
	0J04845A	Reflector A (5)			

8.9. Tone Volume P.C.B. Ass'y

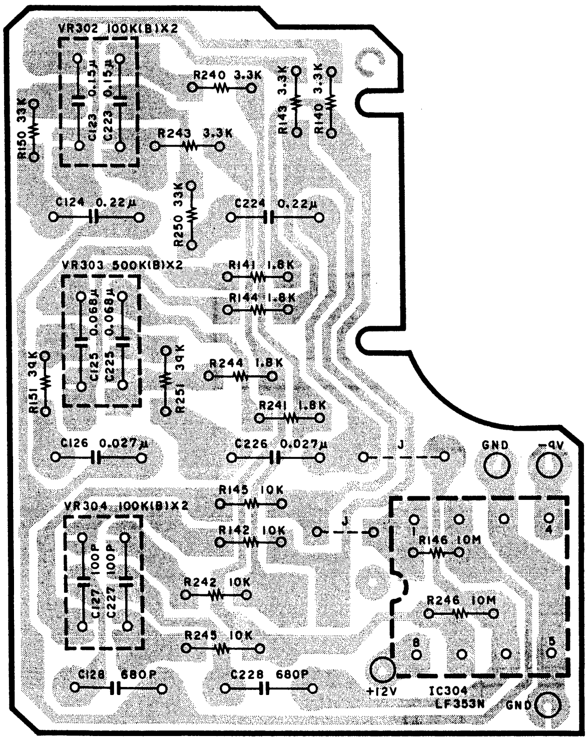
VR302 100K(B)X2
C123 0.15μ
C223 0.15μ
R240 3.3K
R243 3.3K
R143 3.3K
R140 3.3K
R150 33K
C124 0.22μ
C224 0.22μ
R250 33K
VR303 500K(B)X2
C125 0.068μ
C225 0.068μ
R141 1.8K
R144 1.8K
R244 1.8K
R241 1.8K
R151 39K
R251 39K
C126 0.027μ
C226 0.027μ
J
GND
-9V
VR304 100K(B)X2
R145 10K
R142 10K
R242 10K
R245 10K
C127 100P
C227 100P
R146 10M
R246 10M
1
4
8
5
C128 680P
C228 680P
+12V
IC304
LF353N
GND

Fig. 8.9.1 C60406001 - (TD-500 & TD-500E)
C60601390 - (TD-500D)

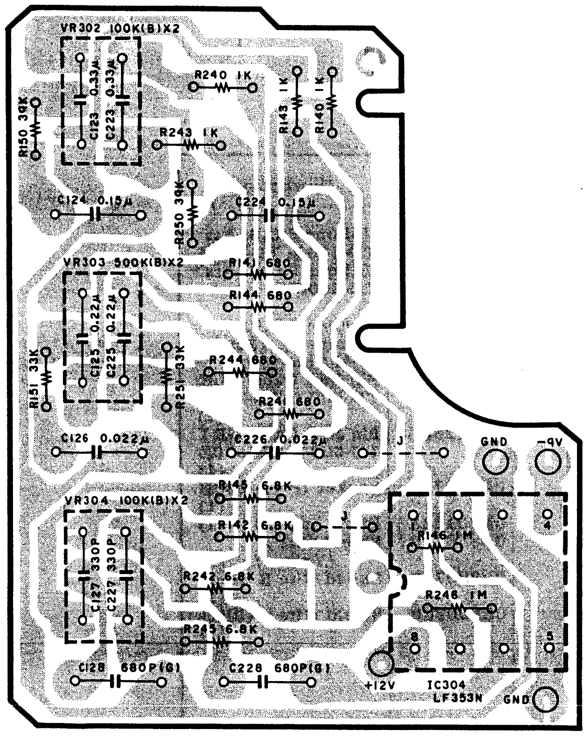
VR302 100K(B)X2
C123 0.33μ
C223 0.33μ
R240 1K
R243 1K
R143 1K
R140 1K
R150 39K
C124 0.15μ
C224 0.15μ
R250 39K
VR303 500K(B)X2
C125 0.22μ
C225 0.22μ
R141 680
R144 680
R244 680
R241 680
R151 33K
R251 33K
C126 0.022μ
C226 0.022μ
J
GND
-9V
VR304 100K(B)X2
R145 6.8K
R142 6.8K
R242 6.8K
R245 6.8K
C127 330P
C227 330P
R146 1M
R246 1M
1
4
8
5
C128 680P(G)
C228 680P(G)
+12V
IC304
LF353N
GND

Fig. 8.9.2 C60401001 - 06000 (TD-500 & TD-500E)
C60601001 - 01389 (TD-500D)

Schematic Ref. No.	Part No.	Description
	BA05613A	Tone Volume P.C.B. Ass'y Serial No.: C60406001 - C60601390 -
	0B60114C	Tone Volume P.C.B.
IC304	0B11155A	IC LF353N (Low Noise)
VR302,304	0B30012A	VR 100K (B)x2
VR303	0B30013A	VR 500K (B)x2
R140,143 240,243	0B23085A	RK 3.3K 1/8W J
R141,144 241,244	0B23079A	RK 1.8K 1/8W J
R142,145 242,245	0B23097A	RK 10K 1/8W J
R146,246	0B25001A	RK 10M 1/8W J
R150,250	0B23109A	RK 33K 1/8W J
R151,251	0B23111A	RK 39K 1/8W J
C123,223	0B41175A	CM 0.15μ 50V J
C124,224	0B41176A	CM 0.22μ 50V J
C125,225	0B41373A	CM 0.068μ 50V J
C126,226	0B09045A	CM 0.027μ 50V J
C127,227	0B41386A	CP 100P 100V J
C128,228	0B09235A	CP 680P 100V J
CP1	0B82383A	6P Coupler
CP2	0B82381A	2P Coupler
	0J04854A	Tone Volume Holder (1)
	BA05421A	Tone Volume P.C.B. Ass'y Serial Nos.: C60401001 - 06000 C60601001 - 01389
	0B60114C	Tone Volume P.C.B.
IC304	0B11032A	IC LF353N
VR302,304	0B30012A	VR 100K (B)x2
VR303	0B30013A	VR 500K (B)x2
R140,143 240,243	0B23073A	RK 1K 1/8W J
R141,144 241,244	0B23069A	RK 680 1/8W J
R142,145 242,245	0B23093A	RK 6.8K 1/8W J
R146,246	0B23145A	RK 1M 1/8W J
R150,250	0B23111A	RK 39K 1/8W J
R151,251	0B23109A	RK 33K 1/8W J
C123,223	0B41177A	CM 0.33μ 50V J
C124,224	0B41175A	CM 0.15μ 50V J
C125,225	0B41176A	CM 0.22μ 50V J
C126,226	0B05582A	CM 0.022μ 50V J
C127,227	0B41213A	CP 330P 100V J
C128,228	0B41121A	CP 680P 100V G
CP1	0B82292A	6P Coupler
CP2	0B82294B	2P Coupler
	0B90021A	Band EG-9 (1)
	0J04854A	Tone Volume Holder (1)

8.10. Motor P.C.B. Ass'y

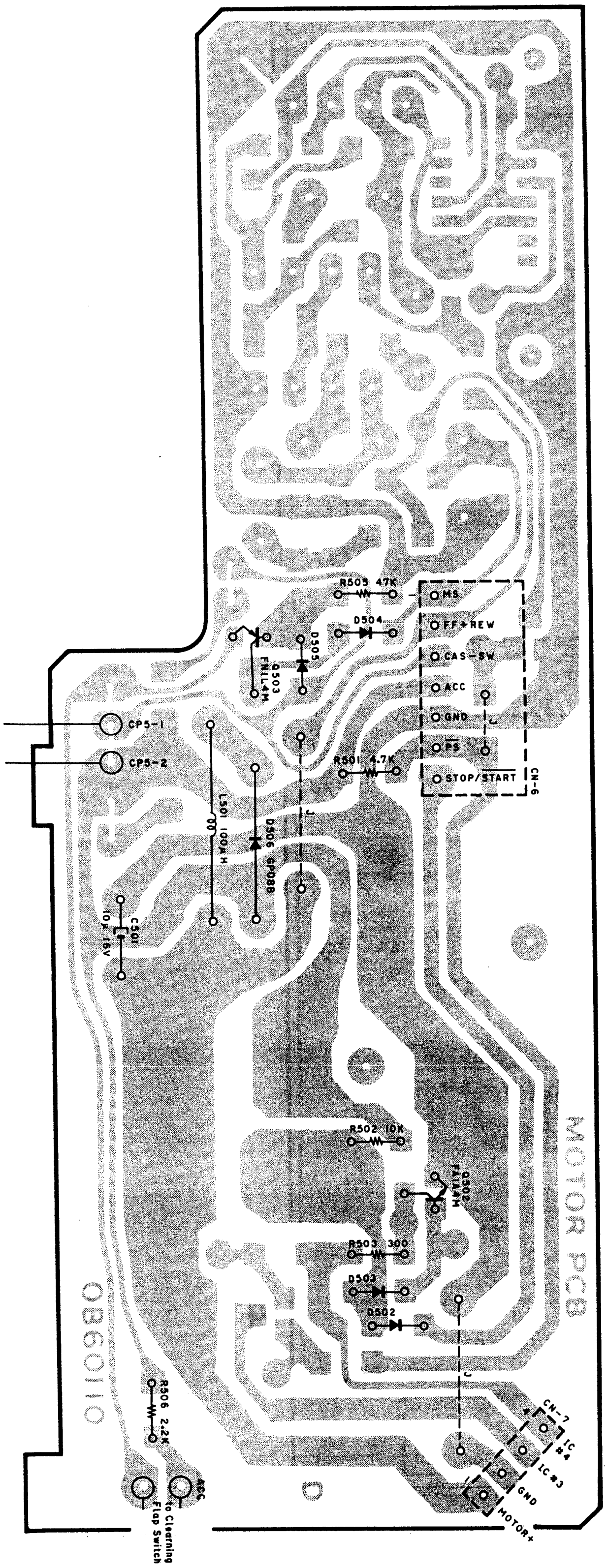
R505 47K
MS
D504
FF+REW
CAS-SW
ACC
Q503 FN1L4M
D505
CP5-1
CP5-2
GND
PS
R501 4.7K
STOP/START
CN-6
L501 100μH
D506 GP08B
C501 10μ 16V
MOTOR PCB
0B60110
R502 10K
Q502 FA1A4M
R503 300
D503
D502
CN-7
IC #4
IC #3
GND
MOTOR+
R506 2.2K
REC
to Clearning Flap Switch

Fig. 8.10

Schematic Ref. No.	Part No.	Description
	BA05413B	Motor P.C.B. Ass'y
	0B60110D	Motor P.C.B.
Q502	0B14144A	TR FA1A4M
Q503	0B14151A	TR FN1L4M
D502,503 504,505	0B13064A	SiD MA221
D506	0B06109A	SiD GP08B
L501	0B51183A	Micro Coil 100μH
R307	0B23121A	RK 100K 1/8W J
R501	0B23089A	RK 4.7K 1/8W J
R502	0B23097A	RK 10K 1/8W J
R503	0B23060A	RK 300 1/8W J
R505	0B23113A	RK 47K 1/8W J
R506	0B23081A	RK 2.2K 1/8W J
C501	0B40162A	CE 10μ 16V
CN6	0B81041A	7P-S Post
CN7	0B81027A	4P-T Post
CP5	0B82300A	2P Coupler

8.11. Tuner P.C.B. Ass'y
(1) For TD-500
(U.S.A. & Canada)

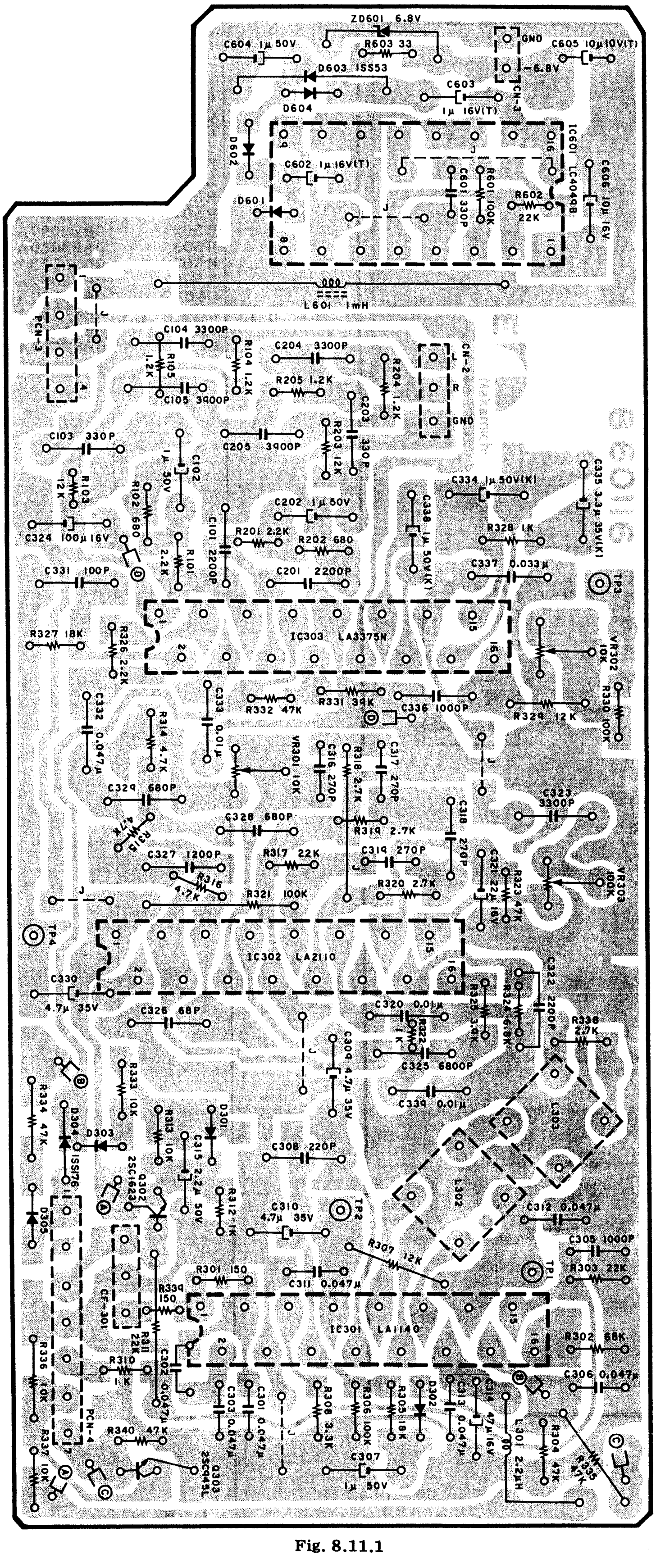
ZD601 6.8V
C604 1μ 50V
R603 33
GND
C605 10μ 10V(T)
D603 1SS53
-6.8V
C603
1μ 16V(T)
CN-3
D604
D602
IC601 LC4049B
C602 1μ 16V(T)
C601 330P
R601 100K
R602 22K
C606 10μ 16V
D601
L601 1mH
PCN-3
C104 3300P
R105 1.2K
R104 1.2K
C105 3300P
C204 3300P
R205 1.2K
R204 1.2K
CN-2
L
R
GND
C203 330P
R203 12K
C205 3900P
C103 330P
C102 1μ 50V
R103 12K
R102 680
C324 100μ 16V
C334 1μ 50V(K)
C335 3.3μ 35V(K)
C202 1μ 50V
C338 1μ 50V(K)
R328 1K
R201 2.2K
R202 680
R101 2.2K
C101 2200P
C337 0.033μ
C331 100P
C201 2200P
TP3
IC303 LA3375N
R327 18K
R326 2.2K
VR302 10K
R330 100K
C332 0.047μ
C333 0.01μ
R332 47K
R331 39K
C336 1000P
R329 12K
R314 4.7K
VR301 10K
C316 270P
R318 2.7K
C317 270P
C329 680P
C318 270P
C323 3300P
R315 47K
C328 680P
R319 2.7K
C327 1200P
R317 22K
C319 270P
VR303 100K
R316 4.7K
R320 2.7K
C321 22μ 16V
R323 47K
R321 100K
TP4
IC302 LA2110
C330 4.7μ 35V
C322 220P
R325 3.9K
R324 6.8K
C326 68P
C320 0.01μ
R322 1K
R338 2.7K
C304 4.7μ 35V
C325 6800P
C339 0.01μ
L303
R334 47K
D304
D303 1SS176
R333 10K
R313 10K
D301
C315 2.2μ 50V
Q302 2SC1623
C308 220P
L302
C312 0.047μ
D305
R312 1K
C310 4.7μ 35V
TP2
C305 1000P
R307 12K
R303 22K
TP1
R301 150
CF-301
R339 150
C311 0.047μ
IC301 LA1140
R311 22K
R302 68K
R336 10K
R310 1K
C302 0.047μ
C303 0.047μ
C301 0.047μ
R308 3.3K
R306 100K
R305 18K
D302
C313 0.047μ
C314 47μ 16V
L301 2.2μH
C306 0.047μ
R304 47K
R335 47K
PCN-4
R340 47K
C307 1μ 50V
R337 10K
Q303 2SC945L
J
A
B
C
D

Fig. 8.11.1

Schematic Ref. No.	Part No.	Description
	BA05424B	Tuner P.C.B. Ass'y TD-500 (U.S.A. & Canada)
	0B60116E	Tuner P.C.B.
IC301	0B06412A	IC LA1140
IC302	0B06414A	IC LA2110
IC303	0B06415B	IC LA3375N
IC601	0B11066A	IC LC4049B
Q302	0B14022A	TR 2SC1623
Q303	0B01872A	TR 2SC945L (P,Q)
ZD601	0B06241A	ZD 6.8V RD6.8EB2
D301,302 303,601 602	0B13064A	SiD MA221
D304	0B06398A	SiD 1SS176
D305,604	0B13003A	SiD RLS-73
D603	0B06181A	SiD 1SS53
L301	0B51106A	Micro Coil 2.2μH
L302	0B51142A	Det. Coil 57-1291-01
L303	0B06712A	Det Coil 57-1057-01
L601	0B51040A	Micro Coil 1mH
VR301,302	0B32035A	Potentiometer 10K
VR303	0B32038A	Potentiometer 100K
R101,201 326	0B23081A	RK 2.2K 1/8W J
R102,202	0B23069A	RK 680 1/8W J
R103,203	0B23099A	RK 12K 1/8W J
R104,105 204,205	0B23075A	RK 1.2K 1/8W J
R301,339	0B23053A	RK 150 1/8W J
R302	0B23117A	RK 68K 1/8W J
R303,317 602	0B23105A	RK 22K 1/8W J
R304,323 332,334 340	0B23113A	RK 47K 1/8W J
R305,327	0B23103A	RK 18K 1/8W J
R306,330 601	0B23121A	RK 100K 1/8W J
R307	0B05650A	RK 12K 1/4W VJ
R308	0B23085A	RK 3.3K 1/8W J
R309	0B23101A	RK 15K 1/8W J
R310,312 322,328	0B23073A	RK 1K 1/8W J
R311	0B05615A	RK 22K 1/4W J
R313,333 336,337	0B23097A	RK 10K 1/8W J
R314,315 316	0B23089A	RK 4.7K 1/8W J
R318	0B05629A	RK 2.7K 1/4W J
R319,320 338	0B23083A	RK 2.7K 1/8W J
R321	0B01889A	RK 100K 1/4W J
R324	0B23093A	RK 6.8K 1/8W J
R325	0B23087A	RK 3.9K 1/8W J
R329	0B09703A	RK 12K 1/6W J
R331	0B23111A	RK 39K 1/8W J
R335	0B09717A	RK 47K 1/6W J
R603	0B23037A	RK 33 1/8W J
C101,201	0B41233A	CP 2200P 100V J
C102,202	0B40255A	CE 1μ 50V
C103,203	0B41213A	CP 330P 100V J
C104,204	0B41237A	CP 3300P 100V J
C105,205	0B41239A	CP 3900P 100V J
C301,302 303,306 311,312 313	0B43053A	CC 0.047μ 50V K
C305	0B43050A	CC 1000P 50V K
C307,603 604	0B40173A	CE 1μ 50V
C308	0B41394A	CP 220P 50V J
C309,330	0B40258A	CE 4.7μ 35V
C310	0B40019A	CE 4.7μ 35V
C314	0B40165A	CE 47μ 16V
C315	0B40174A	CE 2.2μ 50V
C316,317 319	0B43049A	CC 270P 50V K
C318	0B09284A	CC 270P 50V J
C320,333 339	0B41094A	CM 0.01μ 50V
C321	0B40163A	CE 22μ 16V
C322	0B01802A	CM 2200P 50V J
C323	0B01914A	CM 3300P 50V J
C324	0B40206A	CE 100μ 16V
C325	0B05530A	CM 6800P 50V J
C326	0B41191A	C 68P 100V J
C327	0B05687A	CM 1200P 50V J
C328,329	0B05571A	CM 680P 50V J
C331	0B41386A	CP 100P 50V J
C332	0B05796A	CM 0.047μ 50V J
C334,338	0B40263A	CE 1μ 50V K
C335	0B40264A	CE 3.3μ 35V K
C336	0B41225A	CP 1000P 100V J
C337	0B05583A	CM 0.033μ 50V J
C601	0B43055A	CC 330P 50V K
C602	0B43025A	CT 1μ 16V
C605	0B43020A	CT 10μ 10V
C606	0B40162A	CE 10μ 16V
CF301	0B41076A	Ceramic Filter SFE10.7MS3GKY
CN3	0B81036A	2P-S Post (1)
PCN2	0B81283A	3P-S Post (1)
PCN3	0B82288A	4P Connector (1)
PCN4	0B82289A	7P Connector (1)
	0E00764A	M2.6x6 ⊕Pan (2A) (1)
	0J04869A	P.C.B. Holder Stud (1)
	0B81117A	Contact Pin 1P (4)
	0J04871B	Shield Case (1)

(2) For TD-500 (Australia & Others), TD-500E and TD-500D

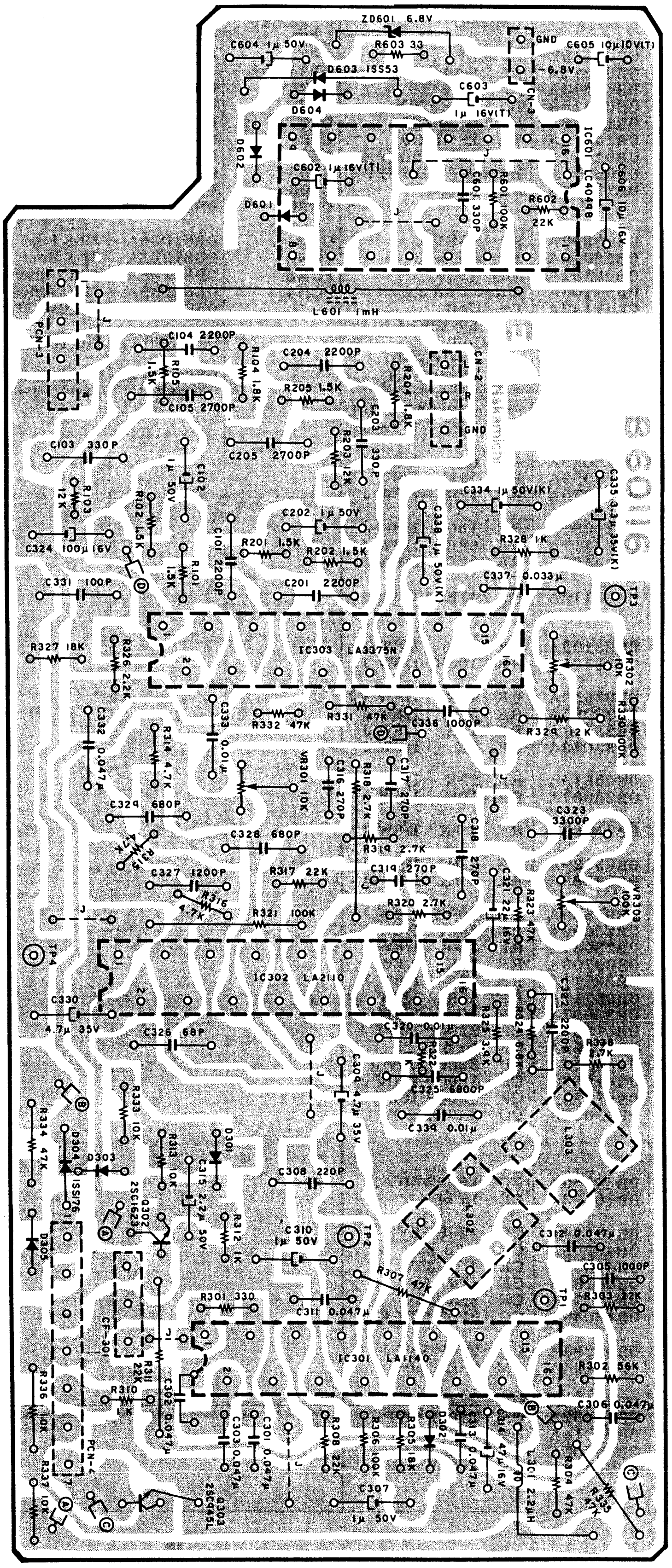
ZD601 6.8V
C604 1μ 50V
R603 33
GND
C605 10μ 10V(T)
D603 1SS53
-6.8V
D604
C603 1μ 16V(T)
CN-3
D602
IC601 LC4049B
C602 1μ 16V(T)
C601 330P
R601 100K
R602 22K
C606 10μ 16V
D601
L601 1mH
PCN-3
C104 2200P
R105 1.5K
R104 1.8K
C105 2700P
C204 2200P
R205 1.5K
R204 1.8K
CN-2
L
R
GND
C103 330P
C205 2700P
R203 12K
C203 330P
C102 1μ 50V
R103 12K
R102 1.5K
C324 100μ 16V
C101 2200P
R201 1.5K
C202 1μ 50V
R202 1.5K
R101 1.5K
C201 2200P
C334 1μ 50V(K)
C335 3.3μ 35V(K)
C338 1μ 50V(K)
R328 1K
C337 0.033μ
TP3
C331 100P
R327 18K
R326 2.2K
IC303 LA3375N
VR302 10K
R330 100K
C332 0.047μ
R314 4.7K
C333 0.01μ
R332 47K
R331 47K
C336 1000P
R329 12K
VR301 10K
C316 270P
R318 2.7K
C317 270P
C329 680P
C328 680P
R319 2.7K
C318 270P
C323 3300P
R315 4.7K
C327 1200P
R316 4.7K
R317 22K
C319 270P
R320 2.7K
C321 22μ 16V
R323 47K
VR303 100K
R321 100K
TP4
IC302 LA2110
C330 4.7μ 35V
C326 68P
C320 0.01μ
R322
R325 3.9K
C322 2200P
R324
R326 2.7K
C325 6800P
C304 4.7μ 35V
C339 0.01μ
L303
R334 47K
D304
1SS176
D303
R333 10K
R313 10K
D301
C315 2.2μ 50V
C308 220P
L302
Q302 2SC1623
R312 1K
C310 1μ 50V
TP2
C312 0.047μ
D305
R307 47K
C305 1000P
TP1
R303 22K
R301 330
C311 0.047μ
CF-301
IC301 LA1140
R302 56K
R311 22K
R310 1K
C302 0.047μ
C306 0.047μ
R336 10K
PCN-4
C303 0.047μ
C301 0.047μ
R308 22K
R306 100K
R305 18K
D302
C313 0.047μ
C314 47μ 16V
L301 2.2μH
R304 47K
R335 47K
R337 10K
C307 1μ 50V
Q303 2SC945L
A
B
C
D
J

Fig. 8.11.2

Schematic Ref. No.	Part No.	Description
	BA05458A	Tuner P.C.B. Ass'y TD-500 (Australia & Others), TD-500E & TD-500D
	0B60116E	Tuner P.C.B.
IC301	0B06412A	IC LA1140
IC302	0B06414A	IC LA2110
IC303	0B06415B	IC LA3375N
IC601	0B11066A	IC LC4049B
Q302	0B14022A	TR 2SC1623
Q303	0B01872A	TR 2SC945L (P,Q)
ZD601	0B06241A	ZD 6.8V RD6.8EB2
D301,302 303,601 602	0B13064A	SiD MA221
D304	0B06398A	SiD 1SS176
D305,604	0B13003A	SiD RLS-73
D603	0B06181A	SiD 1SS53
L301	0B51106A	Micro Coil 2.2μH
L302	0B51142A	Det. Coil 57-1291-01
L303	0B06712A	Det. Coil 57-1057-01
L601	0B51040A	Micro Coil 1mH
VR301,302	0B32035A	Potentiometer 10K
VR303	0B32038A	Potnetiometer 100K
R101,102 105,201 202,205	0B23077A	RK 1.5K 1/8W J
R103,203	0B23099A	RK 12K 1/8W J
R104,204	0B23079A	RK 1.8K 1/8W J
R301	0B23061A	RK 330 1/8W J
R302	0B23115A	RK 56K 1/8W J
R303,308 317,602	0B23105A	RK 22K 1/8W J
R304,323 331,332 334	0B23113A	RK 47K 1/8W J
R305,327	0B23103A	RK 18K 1/8W J
R306,330 601	0B23121A	RK 100K 1/8W J
R307	0B05562A	RK 47K 1/4W VJ
R310,312 322,328	0B23073A	RK 1K 1/8W J
R311	0B05615A	RK 22K 1/4W J
R313,333 336,337	0B23097A	RK 10K 1/8W J
R314,315 316	0B23089A	RK 4.7K 1/8W J
R318	0B05629A	RK 2.7K 1/4W J
R319,320 338	0B23083A	RK 2.7K 1/8W J
R321	0B01889A	RK 100K 1/4W J
R324	0B23093A	RK 6.8K 1/8W J
R325	0B23087A	RK 3.9K 1/8W J
R326	0B23081A	RK 2.2K 1/8W J
R329	0B09703A	RK 12K 1/6W J
R335	0B09717A	RK 47K 1/6W J
R603	0B23037A	RK 33 1/8W J
C101,104 201,204	0B41233A	CP 2200P 100V J
C102,202	0B40255A	CE 1μ 50V
C103,203	0B41213A	CP 330P 100V J
C105,205	0B41235A	CP 2700P 100V J
C301,302 303,306 311,312 313	0B43053A	CC 0.047μ 50V K
C305	0B43050A	CC 1000P 50V K
C307,310 603,604	0B40173A	CE 1μ 50V
C308	0B41394A	CP 220P 50V J
C309,330	0B40258A	CE 4.7μ 35V
C314	0B40165A	CE 47μ 16V
C315	0B40174A	CE 2.2μ 50V
C316,317 319	0B43049A	CC 270P 50V K
C318	0B09284A	CC 270P 50V J
C320,333 339	0B41094A	CM 0.01μ 50V
C321	0B40163A	CE 22μ 16V
C322	0B01802A	CM 2200P 50V J
C323	0B01914A	CM 3300P 50V J
C324	0B40206A	CE 100μ 16V
C325	0B05530A	CM 6800P 50V J
C326	0B41191A	C 68P 100V J
C327	0B05687A	CM 1200P 50V J
C328,329	0B05571A	CM 680P 50V J
C331	0B41386A	CP 100P 50V J
C332	0B05796A	CM 0.047μ 50V J
C334,338	0B40263A	CE 1μ 50V K
C335	0B40264A	CE 3.3μ 35V K
C336	0B41225A	CP 1000P 100V J
C337	0B05583A	CM 0.033μ 50V J
C601	0B43055A	CC 330P 50V K
C602	0B43025A	CT 1μ 16V
C605	0B43020A	CT 10μ 10V
C606	0B40162A	CE 10μ 16V
CF301	0B41076A	Ceramic Filter SFE10.7MS3GKY-A
CN3	0B81036A	2P-S Post (1)
PCN2	0B81283A	3P-S Post (1)
PCN3	0B82288A	4P Connector (1)
PCN4	0B82289A	7P Connector (1)
	0E00764A	M2.6x6 ⊕Pan (2A) (1)
	0J04869A	P.C.B. Holder Stud (1)
	0B81117A	Contact Pin 1P (4)
	0J04871B	Shield Case (1)

(3) For TD-500 (Japan)

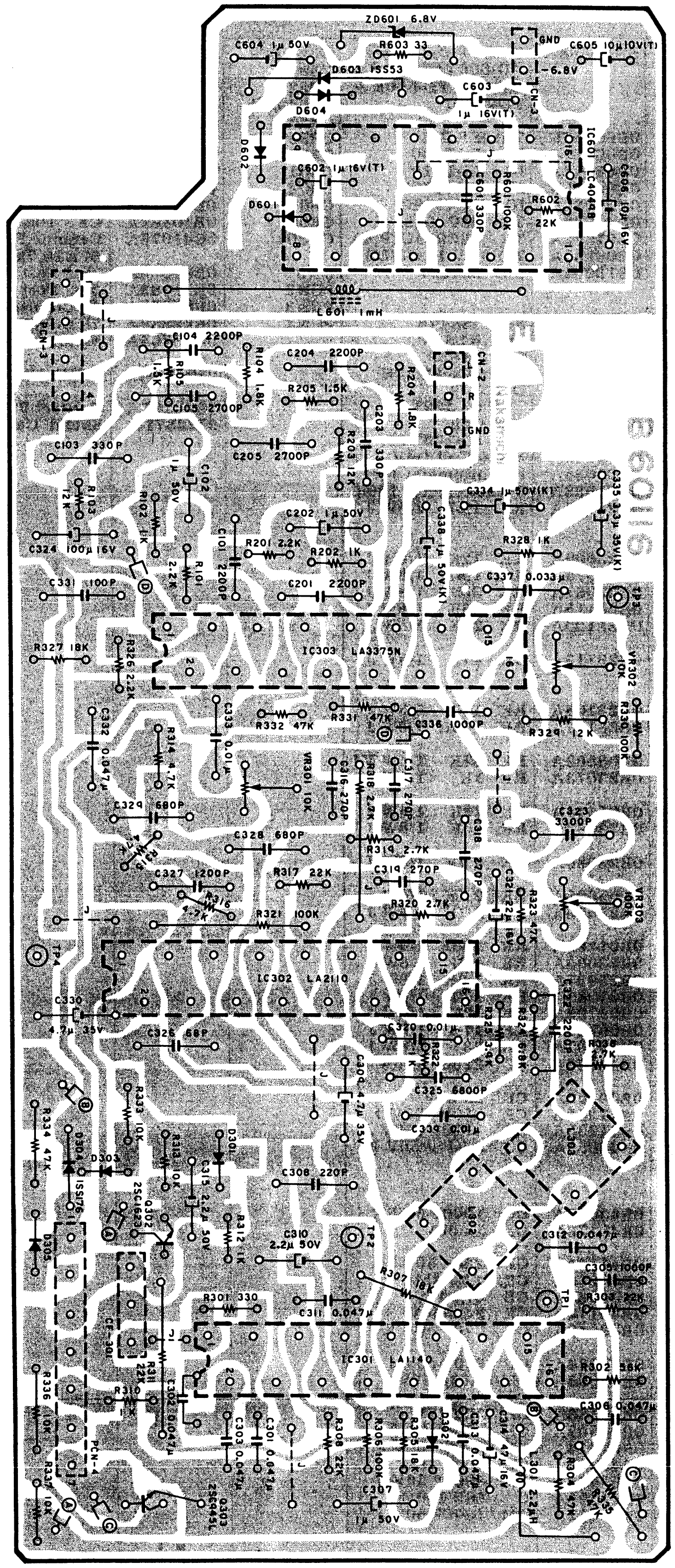
ZD601 6.8V
R603 33
C604 1μ 50V
D603 1SS53
D604
C603 1μ 16V(T)
GND
-6.8V
CN-3
C605 10μ10V(T)
D602
C602 1μ 16V(T)
C601 330P
R601 100K
R602 22K
IC601 LC4049B
C606 10μ 16V
D601
L601 1mH
CN-3
R104 2200P
R105 1.8K
R104 1.8K
C105 2700P
C204 2200P
R205 1.5K
R204 1.8K
CN-2
GND
C103 330P
R103 12K
C102 1μ 50V
R102 1K
C205 2700P
R203 12K
C203 330P
C324 100μ 16V
C101 2200P
R101 2.2K
R201 2.2K
C202 1μ 50V
R202 1K
C338 1μ 50V(K)
C334 1μ 50V(K)
C335 3.3μ 35V(K)
R328 1K
C331 100P
C201 2200P
C337 0.033μ
TP3
R327 18K
R326 2.2K
IC303 LA3375N
VR302 10K
C332 0.047μ
R314 4.7K
C333 0.01μ
R332 47K
R331 47K
C336 1000P
R329 12K
R330 100K
VR301 10K
C316 270P
R318 2.2K
C317 270P
C329 680P
C328 680P
R319 2.7K
C318 270P
C323 3300P
C327 1200P
R317 22K
C319 270P
R316 4.7K
R321 100K
R320 2.7K
C321 22μ 16V
R323 47K
VR303 10K
TP4
IC302 LA2110
C330 4.7μ 35V
C326 68P
C320 0.01μ
R322
R325 3.9K
R324 6.8K
C322 200P
R338 2.7K
C304 4.7μ 35V
C325 6800P
C339 0.01μ
R333 10K
R334 47K
D304 1SS176
D303
R313 10K
C315 2.2μ 50V
D301
L303
C308 220P
Q302 2SC1623
R312 1K
D305
C310 2.2μ 50V
TP2
L302
C312 0.047μ
R307 18K
C309 1000P
TP1
R303 22K
R301 330
C311 0.047μ
CF-301
IC301 LA1140
R311 22K
R310 1K
C302 0.047μ
R302 56K
R336 10K
PCN-4
C303 0.047μ
C301 0.047μ
R308 22K
R306 100K
R305 18K
D302
C313 0.047μ
C314 47μ 16V
L301 2.2μH
R304 47K
R335 47K
C306 0.047μ
R337 10K
Q303 2SC945L
C307 1μ 50V

Fig. 8.11.3

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
	BA05423A	**Tuner P.C.B. Ass'y TD-500 (Japan)**	C332	0B05796A	CM 0.047μ 50V J
	0B60116E	Tuner P.C.B.	C334,338	0B40263A	CE 1μ 50V K
IC301	0B06412A	IC LA1140	C335	0B40264A	CE 3.3μ 35V K
IC302	0B06414A	IC LA2110	C336	0B41225A	CP 1000P 100V J
IC303	0B06415B	IC LA3375N	C337	0B05583A	CM 0.033μ 50V J
IC601	0B11066A	IC LC4049B	C601	0B43055A	CC 330P 50V K
Q302	0B14022A	TR 2SC1623	C602	0B43025A	CT 1μ 16V
Q303	0B01872A	TR 2SC945L (P,Q)	C605	0B43020A	CT 10μ 10V
ZD601	0B06241A	ZD 6.8V RD6.8EB2	C606	0B40162A	CE 10μ 16V
D301,302 303,601 602	0B13064A	SiD MA221	CF301	0B41075A	Ceramic Filter SFE10.7MLK-A
D304	0B06398A	SiD 1SS176	CN3	0B81036A	2P-S Post (1)
D305,604	0B13003A	SiD RLS-73	PCN2	0B81283A	3P-S Post (1)
D603	0B06181A	SiD 1SS53	PCN3	0B82288A	4P Connector (1)
L301	0B51106A	Micro Coil 2.2μH	PCN4	0B82289A	7P Connector (1)
L302	0B51142A	Det. Coil 57-1291-01		0E00764A	M2.6x6 ⊕Pan (2A) (1)
L303	0B06712A	Det. Coil 57-1057-01		0J04869A	P.C.B. Holder Stud (1)
L601	0B51040A	Micro Coil 1mH		0B81117A	Contact Pin 1P (4)
VR301,302	0B32035A	Potentiometer 10K		0J04871B	Shield Case (1)
VR303	0B32038A	Potnetiometer 100K			
R101,201 326	0B23081A	RK 2.2K 1/8W J			
R102,202 310,312 322,328	0B23073A	RK 1K 1/8W J			
R103,203	0B23099A	RK 12K 1/8W J			
R104,204	0B23079A	RK 1.8K 1/8W J			
R105,205	0B23077A	RK 1.5K 1/8W J			
R301	0B23061A	RK 330 1/8W J			
R302	0B23115A	RK 56K 1/8W J			
R303,308 317,602	0B23105A	RK 22K 1/8W J			
R304,323 331,332 334	0B23113A	RK 47K 1/8W J			
R305,327	0B23103A	RK 18K 1/8W J			
R306,330 601	0B23121A	RK 100K 1/8W J			
R307	0B05561A	RK 18K 1/4W VJ			
R311	0B05615A	RK 22K 1/4W J			
R313,333 336,337	0B23097A	RK 10K 1/8W J			
R314,315 316	0B23089A	RK 4.7K 1/8W J			
R318	0B05629A	RK 2.7K 1/4W J			
R319,320 338	0B23083A	RK 2.7K 1/8W J			
R321	0B01889A	RK 100K 1/4W J			
R324	0B23093A	RK 6.8K 1/8W J			
R325	0B23087A	RK 3.9K 1/8W J			
R329	0B09703A	RK 12K 1/6W J			
R335	0B09717A	RK 47K 1/6W J			
R603	0B23037A	RK 33 1/8W J			
C101,104 201,204	0B41233A	CP 2200P 100V J			
C102,202	0B40255A	CE 1μ 50V			
C103,203	0B41213A	CP 330P 100V J			
C105,205	0B41235A	CP 2700P 100V J			
C301,302 303,306 311,312 313	0B43053A	CC 0.047μ 50V K			
C305	0B43050A	CC 1000P 50V K			
C307,603 604	0B40173A	CE 1μ 50V			
C308	0B41394A	CP 220P 50V J			
C309,330	0B40258A	CE 4.7μ 35V			
C310,315	0B40174A	CE 2.2μ 50V			
C314	0B40165A	CE 47μ 16V			
C316,317 319	0B43049A	CC 270P 50V K			
C318	0B09284A	CC 270P 50V J			
C320,333 339	0B41094A	CM 0.01μ 50V			
C321	0B40163A	CE 22μ 16V			
C322	0B01802A	CM 2200P 50V J			
C323	0B01914A	CM 3300P 50V J			
C324	0B40206A	CE 100μ 16V			
C325	0B05530A	CM 6800P 50V J			
C326	0B41191A	C 68P 100V J			
C327	0B05687A	CM 1200P 50V J			
C328,329	0B05571A	CM 680P 50V J			
C331	0B41386A	CP 100P 50V J			

Schematic Ref. No.	Part No.	Description
	BA05610A	**Amp. P.C.B. Ass'y** Serial No.: C60406001 - C60601390 -
	— Dolby NR —	
IC101,201	0B14119A	IC TEA0665
ZD302	0B13011A	ZD 5.6V RLZ5.6BTE-11
D201	0B13003A	SiD RLS-73
L101,201	0B51149A	Inductor 8.2mH
L102,202	0B51146A	L-C Block
R123,223	0B23057A	RK 220 1/8W J
R124,224	0B23089A	RK 4.7K 1/8W J
R125,225	0B23071A	RK 820 1/8W J
R126,226	0B23059A	RK 270 1/8W J
R127,227	0B26007A	RM 33K 1/8W F
R128,228	0B26006A	RM 82K 1/8W F
R129,229	0B23090A	RK 5.1K 1/8W J
R130,230	0B23117A	RK 68K 1/8W J
R131,231 302	0B23081A	RK 2.2K 1/8W J
R132,232	0B22447A	RM 82K 1/6W F
R303	0B23097A	RK 10K 1/8W J
R309	0B09669A	RK 470 1/6W J
C109,209	0B05659A	CM 5600P 50V J
C110,116 210,216	0B41141A	CP 4700P 100V G
C111,117 211,217 302	0B40009A	CE 10μ 16V
C112,118 212,218	0B41371A	CM 0.047μ 50V J
C113,119 213,219	0B41176A	CM 0.22μ 50V J
C114,120 214,220	0B40282A	CT 0.68μ 35V K
C115,215	0B05681A	CM 0.01μ 50V J
C129,229	0B40206A	CE 100μ 16V
C130,230	0B40207A	CE 470μ 6.3V
	0B81117A	Contact Pin 1P (2)
	— Head Amp. —	
IC301	0B11017A	IC NJM072S-E
Q101,201	0B06376A	FET 2SK170 (GR)
Q102,202	0B14022A	TR 2SC1623
ZD301	0B12162A	ZD 8.2V RD8.2JS-T1B2
VR101,201	0B32039A	Potentiometer 10K
R101,106 201,206	0B23121A	RK 100K 1/8W J
R102,202	0B22601A	RM 80.6 1/4W F
R103,203	0B22644A	RM 1.54K 1/4W F
R105,205	0B26010A	RM 8.25K 1/8W F
R107,207	0B22548A	RM 4.7M 1/4W J
R108,208	0B22491A	RM 210K 1/6W F
R109,209	0B26002A	RM 2.15K 1/8W F
R110,210	0B26003A	RM 2.67K 1/8W F
R111,211	0B23093A	RK 6.8K 1/8W J
R112,212	0B23097A	RK 10K 1/8W J
R113,213	0B23145A	RK 1M 1/8W J
R306	0B23081A	RK 2.2K 1/8W J
R307	0B23069A	RK 680 1/8W J
C101,201	0B41177A	CM 0.33μ 50V J
C102,202	0B40259A	CE 10μ 16V
C103,203	0B09858A	CM 0.015μ 50V J
C104,204	0B09861A	CF 0.027μ 50V J
C301	0B40357A	CE 330μ 10V
C302	0B40356A	CE 220μ 10V
	0B81117A	Contact Pin 1P (1)
	0B90044A	Shield Belt (1)
	— Subsonic Filter —	
IC302	0B11032A	IC LF353N
IC305	0B11027A	IC TC9145P
D301	0B13063A	SiD DAP202K
R115,215	0B23115A	RK 56K 1/8W J
R116,118 216,218	0B23137A	RK 470K 1/8W J
R117,217	0B23129A	RK 220K 1/8W J
R119,219	0B23139A	RK 560K 1/8W J
R120,220	0B26004A	RM 8.66K 1/8W F
R121,221	0B23145A	RK 1M 1/8W J
R122,222	0B26005A	RM 1K 1/8W F
R149,249	0B23141A	RK 680K 1/8W J
R301	0B23091A	RK 5.6K 1/8W J
R308	0B23069A	RK 680 1/8W J
C105,106 205,206	0B41369A	CM 0.033μ 50V J
C107,207	0B41373A	CM 0.068μ 50V J
C108,208	0B40256A	CE 2.2μ 50V
	— Line Amp. —	
IC303	0B11001A	IC NJM4558M
Q103,203	0B06299A	TR 2SC2878
Q301	0B14027A	TR 2SA812
R133,134 135,136 233,234 235,236	0B26009A	RM 100K 1/8W F
R137,237	0B26010A	RM 8.25K 1/8W F
R138,139 238,239	0B26008A	RM 10K 1/8W F
R147,247	0B23073A	RK 1K 1/8W J
R148,248	0B23089A	RK 4.7K 1/8W J
R304	0B23097A	RK 10K 1/8W J
R305	0B23121A	RK 100K 1/8W J
C121,122 221,222	0B41476A	CM 0.1μ 50V J
SW301	0B70022A	Slide Switch
	— Miscellaneous —	
	0B60113E	Amp. P.C.B.
CN1	0B81187A	4P-S Post
CN2	0B82303A	3P-H Connector
CN3	0B82304A	1P Connector
CP1	0B82382A	6P Coupler EMC-G06
CP2	0B82380A	2P Coupler EMC-G02
PCN1	0B82335A	3P Connector
PCN2	0B82337A	6P Connector
	0B90021A	Band EG-9 (2)
	0E00174A	Earth Lug B-4 (1)
	BA05417B	**Amp. P.C.B. Ass'y** Serial Nos.: C60401001 - 06000 C60601001 - 01389 Contents is the same as BA05610A except for the following parts:
CP1	0B82293A	6P Coupler TVQ (1)
CP2	0B82295B	2P Coupler TVQ (1)

8.12. Amp. P.C.B. Ass'y

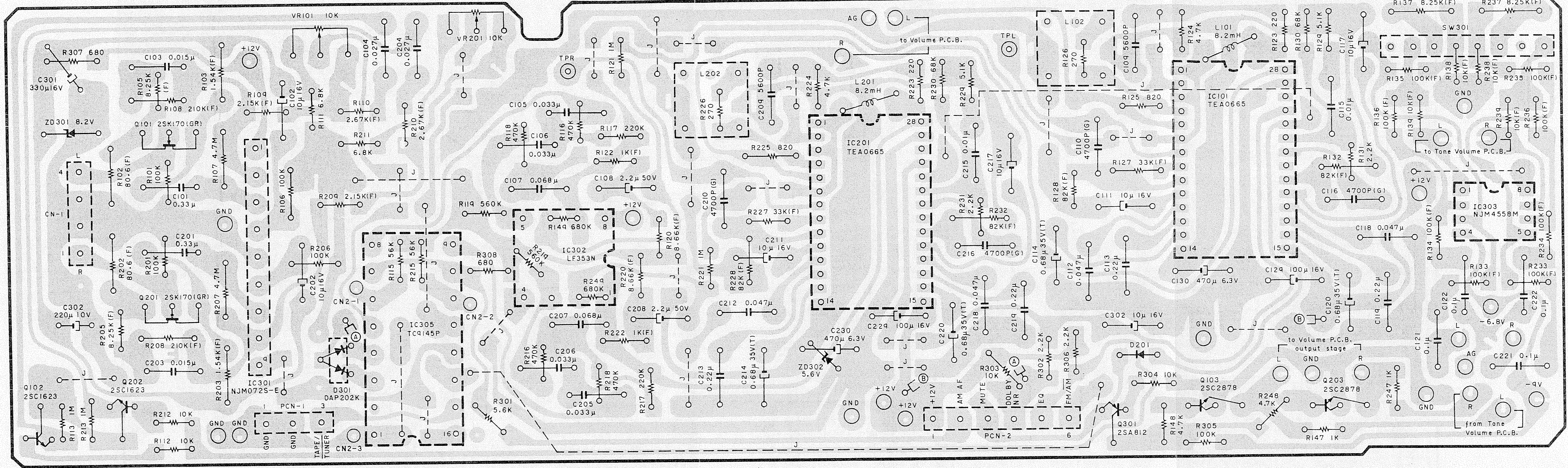
R307 680
C301 330μ16V
ZD301 8.2V
C103 0.015μ
R105 8.25K (F)
R108 210K(F)
R103 1.54K(F)
+12V
VR101 10K
C104 0.027μ
C204 0.027μ
VR201 10K
R109 2.15K(F)
C102 10μ16V
R111 6.8K
R110 2.67K(F)
R210 2.67K(F)
R211 6.8K
Q101 2SK170(GR)
CN-1
L
R
R102 80.6(F)
R101 100K
C101 0.33μ
R107 4.7M
R106 100K
R209 2.15K(F)
GND
C201 0.33μ
R201 100K
R202 80.6(F)
R206 100K
C202 10μ16V
Q201 2SK170(GR)
R207 4.7M
C302 220μ 10V
R205 8.25K(F)
R208 210K(F)
C203 0.015μ
R203 1.54K(F)
IC301 NJM072S-E
Q102 2SC1623
Q202 2SC1623
R113 1M
R213 1M
R212 10K
R112 10K
GND
GND
PCN-1
GND
GND
TAPE/TUNER
CN2-1
CN2-2
CN2-3
D301 DAP202K
IC305 TC9145P
R115 56K
R215 56K
R119 560K
R308 680
R301 5.6K
TPR
R121 1M
C105 0.033μ
R118 470K
C106 0.033μ
R116 470K
R117 220K
R122 1K(F)
C107 0.068μ
C108 2.2μ 50V
IC302 LF353N
R149 680K
R219 560K
R249 680K
R120 8.66K(F)
R220 8.66K(F)
C207 0.068μ
C208 2.2μ 50V
R222 1K(F)
R216 470K
C206 0.033μ
R218 470K
C205 0.033μ
R217 220K
L202
R226 270
C209 5600P
C210 4700P(G)
R225 820
R227 33K(F)
R221 1M
R228 82K(F)
C211 10μ 16V
C212 0.047μ
C213 0.22μ
C214 0.68μ 35V(T)
ZD302 5.6V
C230 470μ 6.3V
AG
L
R
to Volume P.C.B.
R224 4.7K
L201 8.2mH
R223 220
R230 68K
R229 5.1K
IC201 TEA0665
C215 0.01μ
C217 10μ16V
R231 2.2K
R232 82K(F)
C216 4700P(G)
C229 100μ 16V
C220 0.68μ35V(T)
C218 0.047μ
C219 0.22μ
R303 10K
R302 2.2K
R306 2.2K
PCN-2
+12V
AM AF
MUTE
DOLBY NR
EQ
FM/AM
TPL
L102
R126 270
C109 5600P
R124 4.7K
L101 8.2mH
R123 220
R130 68K
R129 5.1K
C117 10μ16V
IC101 TEA0665
R125 820
C110 4700P(G)
R127 33K(F)
R128 82K(F)
C111 10μ 16V
C114 0.68μ35V(T)
C112 0.047μ
C113 0.22μ
C130 470μ 6.3V
C129 100μ 16V
C115 0.01μ
C302 10μ 16V
D201
R304 10K
Q301 2SA812
R148 4.7K
R305 100K
Q103 2SC2878
R248 4.7K
Q203 2SC2878
R147 1K
to Volume P.C.B. output stage
R137 8.25K(F)
R237 8.25K(F)
SW301
R135 100K(F)
R138 10K(F)
R238 10K(F)
R235 100K(F)
R136 100K(F)
R139 10K(F)
R239 10K(F)
R236 100K(F)
to Tone Volume P.C.B.
R132 82K(F)
R131 2.2K
C116 4700P(G)
C118 0.047μ
IC303 NJM4558M
R134 100K(F)
R234 100K(F)
R133 100K(F)
R233 100K(F)
C122 0.1μ
C222 0.1μ
-6.8V
C120 0.68μ35V(T)
C119 0.22μ
C121 0.1μ
C221 0.1μ
R247 1K
-9V
from Tone Volume P.C.B.
J
Ⓐ
Ⓑ

Fig. 8.12

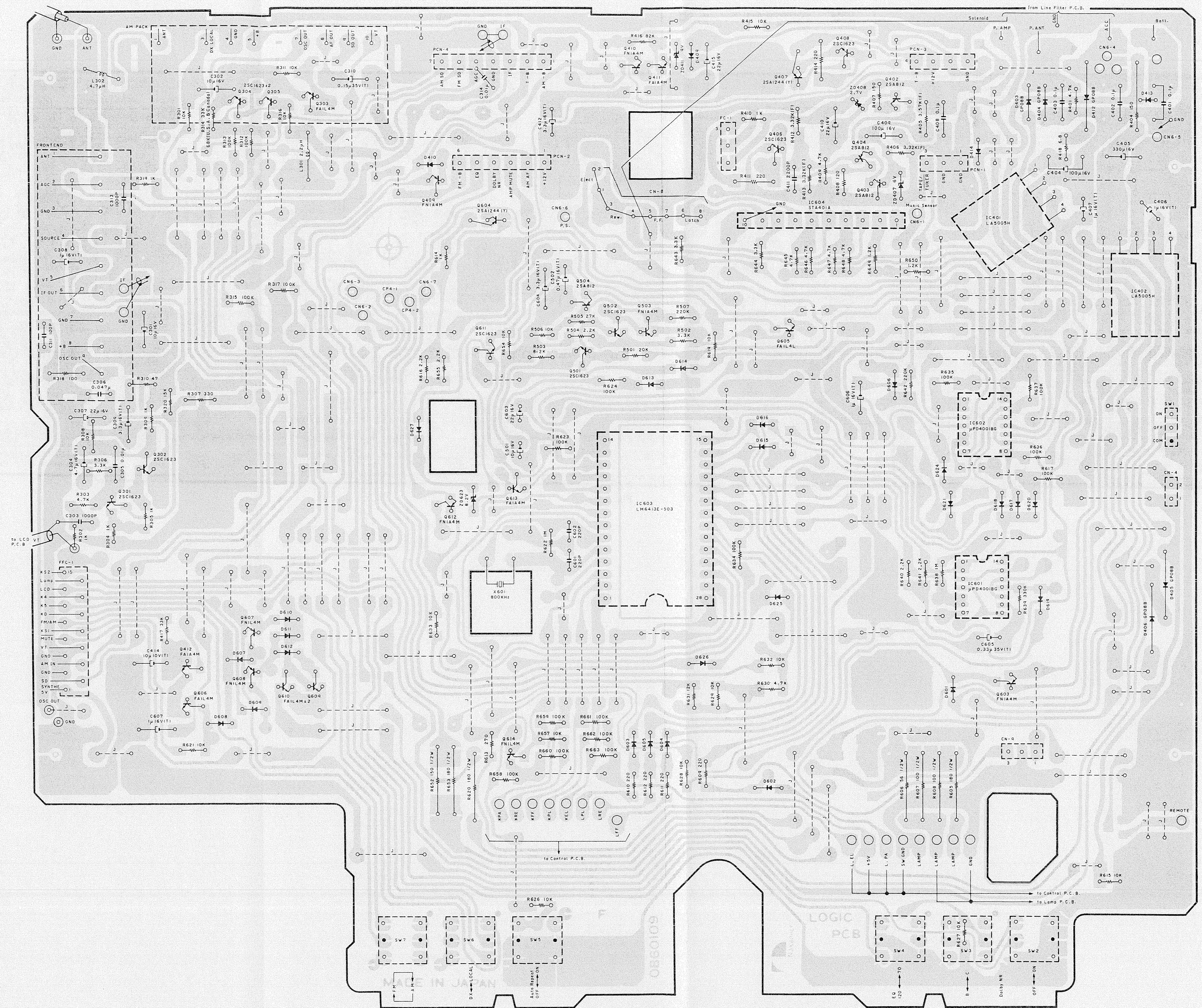
AM PACK
FRONTEND
PCN-4
PCN-3
PCN-2
PCN-1
CN-8
IC604 STA401A
IC401 LA5005H
IC402 LA5005H
IC602 μPD4001BG
IC601 μPD4001BG
IC603 LM6413E-503
X601 800KHz
FFC-1
SW1
SW2
SW3
SW4
SW5
SW6
SW7
CN-4
CN-9
REMOTE
to Control P.C.B.
to Lamp P.C.B.
to LCD VT P.C.B
from Line Filter P.C.B.
Solenoid
Music Sensor
LOGIC PCB
MADE IN JAPAN
0860109
Auto Repeat
DX LOCAL
Dolby NR

Fig. 8.13.1 C60406401 - (TD-500 & TD-500E)

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Schematic Ref. No.	Part No.	Description
	BA05615A	**Logic P.C.B. Ass'y TD-500 (Japan)**
	BA05616A	**Logic P.C.B. Ass'y TD-500 (U.S.A. & Canada)**
	BA05617A	**Logic P.C.B. Ass'y TD-500 (Australia & Others) & TD-500E**
	BA05621A	**Logic P.C.B. Ass'y TD-500D** Serial No.: C60406401 -
	— CPU —	
IC601,602	0B11063A	IC μPD4001BG
IC603	0B11061A	IC LM6413E-503
IC604	0B10048A	IC STA401A
Q603,612	0B14153A	TR FN1A4M
Q604	0B10017A	TR 2SA1244 (Y)
Q605	0B14149A	TR FA1L4L
Q606,609 610	0B14146A	TR FA1L4M
Q607,608 614	0B14151A	TR FN1L4M
Q611	0B14022A	TR 2SC1623
Q613	0B14144A	TR FA1A4M
ZD623	0B13024A	ZD 8.2V RLZ8.2CTE-11
D601-621 624-627	0B13064A	SiD MA221 (25)
X601	0B02307A	Crystal 800kHz
R605,620 653	0B24035A	RF 180 1/2W J
R606	0B24041A	RF 56 1/2W J
R607,608	0B09907A	RF 100 1/2W J
R609,610 611,612	0B23057A	RK 220 1/8W J
R613	0B23059A	RK 270 1/8W J
R614	0B23073A	RK 1K 1/8W J
R615,619 621,626 627,628 629,632 633,654 657	0B23097A	RK 10K 1/8W J
R616,640 641,655	0B23081A	RK 2.2K 1/8W J
R617,623 624,634 635,636 637 658-663	0B23121A	RK 100K 1/8W J (13)
R622,638	0B23145A	RK 1M 1/8W J
R630 645-648	0B23089A	RK 4.7K 1/8W J (5)
R631	0B23099A	RK 12K 1/8W J
R639	0B23133A	RK 330K 1/8W J
R642	0B23129A	RK 220K 1/8W J
R643,644	0B23085A	RK 3.3K 1/8W J
R649,650	0B23075A	RK 1.2K 1/8W J
R652	0B24040A	RF 150 1/2W J
C601,602	0B43048A	CC 220P 50V K
C603	0B40163A	CE 22μ 16V
C604	0B43028A	CT 3.3μ 16V
C605	0B43037A	CT 0.33μ 35V
C606,607	0B43025A	CT 1μ 16V
SW1-5	0B70018A	Push Switch
SW6	0B70021A	Slide Switch
SW7	0B70019A	Push Switch
CN4	0B81025A	2P-T Post
FFC1	0B81279A	15P FFC Connector
	— Regulator —	
IC401,402	0B11034A	IC LA5005H
Q402,403 404	0B14027A	TR 2SA812
Q406,408	0B14022A	TR 2SC1623
Q407	0B10017A	TR 2SA1244 (Y)
Q409,410	0B14153A	TR FN1A4M
Q411,412	0B14144A	TR FA1A4M
ZD407	0B13014A	ZD 6V PLZ6.2BTE-11
ZD408	0B14121A	ZD 2.7V RD2.7MB-T1A
ZD411	0B13026A	ZD 9V RLZ9.1BTE-11
D403,404 405,406 412	0B06109A	SiD GP08B
D409,410	0B13003A	SiD RLS-73
D413,414	0B13064A	SiD MA221
R401,409	0B23089A	RK 4.7K 1/8W J
R404	0B05795A	RK 150 1/4W J
R405	0B26012A	RM 3.57K 1/8W F
R406,412 413	0B26013A	RM 3.32K 1/8W F
R407	0B23053A	RK 150 1/8W J
R408	0B23051A	RK 120 1/8W J
R410	0B23073A	RK 1K 1/8W J
R411,414	0B23150A	RK 220 1/4W J
R415	0B23097A	RK 10K 1/8W J
R416	0B23119A	RK 82K 1/8W J
R417	0B23109A	RK 33K 1/8W J
R418	0B23021A	RK 6.8 1/8W J
C401,402 408	0B09292A	CC 0.1μ 50V Z
C403	0B43054A	CC 0.1μ 50V Z
C404,409	0B40206A	CE 100μ 16V
C405	0B40080A	CE 330μ 16V
C406,407	0B43025A	CT 1μ 16V
C410,415	0B40163A	CE 22μ 16V
C411	0B43051A	CC 2200P 50V K
C412	0B43028A	CT 3.3μ 16V
C414	0B43020A	CT 10μ 10V
	— Reset —	
Q501,502	0B14022A	TR 2SC1623
Q503	0B14153A	TR FN1A4M
Q504	0B14027A	TR 2SA812
R501	0B23104A	RK 20K 1/8W J
R502	0B23085A	RK 3.3K 1/8W J
R503	0B23095A	RK 8.2K 1/8W J
R504	0B23081A	RK 2.2K 1/8W J
R505	0B23107A	RK 27K 1/8W J
R506	0B23097A	RK 10K 1/8W J
R507	0B23129A	RK 220K 1/8W J
C501	0B40162A	CE 10μ 16V
C502	0B43023A	CT 0.47μ 16V
	— Tuner —	
Q301,302 304,305	0B14022A	TR 2SC1623
Q303	0B14146A	TR FA1L4M
L301	0B51106A	Micro Coil 2.2μH
L302	0B51011A	Micro Coil 4.7μH
R301,308 311,316	0B23097A	RK 10K 1/8W J
R302,304 305,309 319	0B23073A	RK 1K 1/8W J
R303	0B23089A	RK 4.7K 1/8W J
R306	0B23085A	RK 3.3K 1/8W J
R307	0B23061A	RK 330 1/8W J
R310	0B23041A	RK 47 1/8W J
R312,313 315,317	0B23121A	RK 100K 1/8W J
R314	0B23109A	RK 33K 1/8W J (except for U.S.A. & Canada)
	0B23117A	RK 68K 1/8W J (U.S.A. & Canada)
R318	0B09653A	RK 100 1/6W J
R320	0B23101A	RK 15K 1/8W J
C301,302	0B40162A	CE 10μ 16V
C303	0B43050A	CC 1000P 50V K
C304	0B40280A	CT 4.7μ 16V
C305	0B41094A	CM 0.01μ 50V J
C306	0B43053A	CC 0.047μ 50V K
C307	0B40163A	CE 22μ 16V
C308	0B43025A	CT 1μ 16V
C309	0B40279A	CT 3.3μ 16V
C310	0B43035A	CT 0.15μ 35V
C311	0B43047A	CC 100P 50V K
C313	0B41082A	CM 1000P 50V J
C314	0B43052A	CC 0.01μ 50V K
	0B91005A	AM Pack (1)
	0B91006A	Front-end TD-500 (Australia & Others), TD-500E & TD-500D
	0B91004A	Front-end TD-500 (U.S.A. & Canada)
	0B91003A	Front-end TD-500 (Japan)
	— Miscellaneous —	
	0B60109F	Logic P.C.B.
CN9	0B81037A	3P-S Post
	0B81273B	4P Terminal (1)
	0B82290A	4P Connector (1)
	0B82291A	7P Connector (1)
	0B82298B	2P Coupler (1)
	0B82307C	7P-H Connector (1)
	0B82309B	8P-H Connector (1)
	0B82334A	3P Connector (1)
	0B82336A	6P Connector (1)
	0B90019A	SK Binder (1)
	0E00174A	Earth Lug B-4 (4)
	0B81272B	4P Terminal Male TD-500D (1)
	0B81273B	4P Terminal Female TD-500D (1)
	0B81268B	4P Terminal Male TD-500 & TD-500E (1)
	BA05501A	Line Filter P.C.B. Ass'y (1)
	BA05497A	Transistor P.C.B. Ass'y (1)

Schematic Ref. No.	Part No.	Description
	BA05615A	**Logic P.C.B. Ass'y TD-500 (Japan)**
	BA05616A	**Logic P.C.B. Ass'y TD-500 (U.S.A. & Canada)**
	BA05617A	**Logic P.C.B. Ass'y TD-500 (Australia & Others) & TD-500E**
	BA05621A	**Logic P.C.B. Ass'y TD-500D** Serial Nos.: C60405146 - 06400 C60601390 -
	— CPU —	
IC601,602	0B11063A	IC μPD4001BG
IC603	0B11061A	IC LM6413E-503
IC604	0B10048A	IC STA401A
Q603,612	0B14153A	TR FN1A4M
Q604	0B10017A	TR 2SA1244 (Y)
Q605	0B14149A	TR FA1L4L
Q606,609 610	0B14146A	TR FA1L4M
Q607,608	0B14151A	TR FN1L4M
Q611	0B14022A	TR 2SC1623
Q613	0B14144A	TR FA1A4M
ZD623	0B13024A	ZD 8.2V RLZ8.2CTE-11
D601-621 624-627	0B13064A	SiD MA221 (25)
X601	0B02307A	Crystal 800kHz
R605,620 653	0B24035A	RF 180 1/2W J
R606	0B24041A	RF 56 1/2W J
R607,608	0B09907A	RF 100 1/2W J
R609,610 611,612	0B23057A	RK 220 1/8W J
R613	0B23059A	RK 270 1/8W J
R614	0B23073A	RK 1K 1/8W J
R615,619 621,626 627,628 629,632 633,654	0B23097A	RK 10K 1/8W J
R616,640 641,655	0B23081A	RK 2.2K 1/8W J
R617,623 624,634 635,636 637	0B23121A	RK 100K 1/8W J
R618	0B21001A	R-Network 100Kx6
R622,638	0B23145A	RK 1M 1/8W J
R630 645-650	0B23089A	RK 4.7K 1/8W J (7)
R631	0B23099A	RK 12K 1/8W J
R639	0B23133A	RK 330K 1/8W J
R642	0B23129A	RK 220K 1/8W J
R643,644	0B23085A	RK 3.3K 1/8W J
R652	0B24040A	RF 150 1/2W J
C601,602	0B43048A	CC 220P 50V K
C603	0B40163A	CE 22μ 16V
C604	0B43028A	CT 3.3μ 16V
C605	0B43037A	CT 0.33μ 35V
C606,607	0B43025A	CT 1μ 16V
SW1-5	0B70018A	Push Switch
SW6	0B70021A	Slide Switch
SW7	0B70019A	Push Switch
CN4	0B81025A	2P-T Post
FFC1	0B81279A	15P FFC Connector
	— Regulator —	
IC401,402	0B11034A	IC LA5005H
Q402,403 404	0B14027A	TR 2SA812
Q406,408	0B14022A	TR 2SC1623
Q407	0B10017A	TR 2SA1244 (Y)
Q409,410	0B14153A	TR FN1A4M
Q411,412	0B14144A	TR FA1A4M
ZD407	0B13014A	ZD 6V PLZ6.2BTE-11
ZD408	0B14121A	ZD 2.7V RD2.7MB-T1A
ZD411	0B13026A	ZD 9V RLZ9.1BTE-11
D403,404 405,406 412	0B06109A	SiD GP08B
D409,410	0B13003A	SiD RLS-73
D413,414	0B13064A	SiD MA221
R401,409	0B23089A	RK 4.7K 1/8W J
R404	0B01933A	RK 220 1/4W J
R405	0B26012A	RM 3.57K 1/8W F
R406,412 413	0B26013A	RM 3.32K 1/8W F
R407	0B23053A	RK 150 1/8W J
R408	0B23051A	RK 120 1/8W J
R410	0B23073A	RK 1K 1/8W J
R411,414	0B23150A	RK 220 1/4W J
R415	0B23097A	RK 10K 1/8W J
R416	0B23119A	RK 82K 1/8W J
R417	0B23109A	RK 33K 1/8W J
R418	0B23021A	RK 6.8 1/8W J
C401,402 408	0B09292A	CC 0.1μ 50V Z
C403	0B43054A	CC 0.1μ 50V Z
C404,409	0B40206A	CE 100μ 16V
C405	0B40080A	CE 330μ 16V
C406,407	0B43025A	CT 1μ 16V
C410,415	0B40163A	CE 22μ 16V
C411	0B43051A	CC 2200P 50V K
C412	0B43028A	CT 3.3μ 16V
C414	0B43020A	CT 10μ 10V
	— Reset —	
Q501,502	0B14022A	TR 2SC1623
Q503	0B14153A	TR FN1A4M
Q504	0B14027A	TR 2SA812
R501	0B23104A	RK 20K 1/8W J
R502	0B23085A	RK 3.3K 1/8W J
R503	0B23095A	RK 8.2K 1/8W J
R504	0B23081A	RK 2.2K 1/8W J
R505	0B23107A	RK 27K 1/8W J
R506	0B23097A	RK 10K 1/8W J
R507	0B23129A	RK 220K 1/8W J
C501	0B40162A	CE 10μ 16V
C502	0B43023A	CT 0.47μ 16V
	— Tuner —	
Q301,302 304,305	0B14022A	TR 2SC1623
Q303	0B14146A	TR FA1L4M
L301	0B51106A	Micro Coil 2.2μH
L302	0B51011A	Micro Coil 4.7μH
R301,308 311,316	0B23097A	RK 10K 1/8W J
R302,304 305,309 319	0B23073A	RK 1K 1/8W J
R303	0B23089A	RK 4.7K 1/8W J
R306	0B23085A	RK 3.3K 1/8W J
R307	0B23061A	RK 330 1/8W J
R310	0B23041A	RK 47 1/8W J
R312,313 315,317	0B23121A	RK 100K 1/8W J
R314	0B23109A	RK 33K 1/8W J (except for U.S.A. & Canada)
	0B23117A	RK 68K 1/8W J (U.S.A. & Canada)
R318	0B09653A	RK 100 1/6W J
R320	0B23101A	RK 15K 1/8W J
C301,302	0B40162A	CE 10μ 16V
C303	0B43050A	CC 1000P 50V K
C304	0B40280A	CT 4.7μ 16V
C305	0B41094A	CM 0.01μ 50V J
C306	0B43053A	CC 0.047μ 50V K
C307	0B40163A	CE 22μ 16V
C308	0B43025A	CT 1μ 16V
C309	0B40279A	CT 3.3μ 16V
C310	0B43035A	CT 0.15μ 35V
C311	0B43047A	CC 100P 50V K
C313	0B41082A	CM 1000P 50V J
C314	0B43052A	CC 0.01μ 50V K
	0B91005A	AM Pack (1)
	0B91006A	Front-end TD-500 (Australia & Others), TD-500E & TD-500D
	0B91004A	Front-end TD-500 (U.S.A. & Canada)
	0B91003A	Front-end TD-500 (Japan)
	— Miscellaneous —	
	0B60109D	Logic P.C.B.
CN9	0B81037A	3P-S Post
	0B81273B	4P Terminal (1)
	0B82290A	4P Connector (1)
	0B82291A	7P Connector (1)
	0B82298B	2P Coupler (1)
	0B82307C	7P-H Connector (1)
	0B82309B	8P-H Connector (1)
	0B82334A	3P Connector (1)
	0B82336A	6P Connector (1)
	0B90019A	SK Binder (1)
	0E00174A	Earth Lug B-4 (4)
	0B81272B	4P Terminal Male TD-500D (1)
	0B81273B	4P Terminal Female TD-500D (1)
	0B81268B	4P Terminal Male TD-500 & TD-500E (1)
	BA05501A	Line Filter P.C.B. Ass'y (1)
	BA05497A	Transistor P.C.B. Ass'y (1)

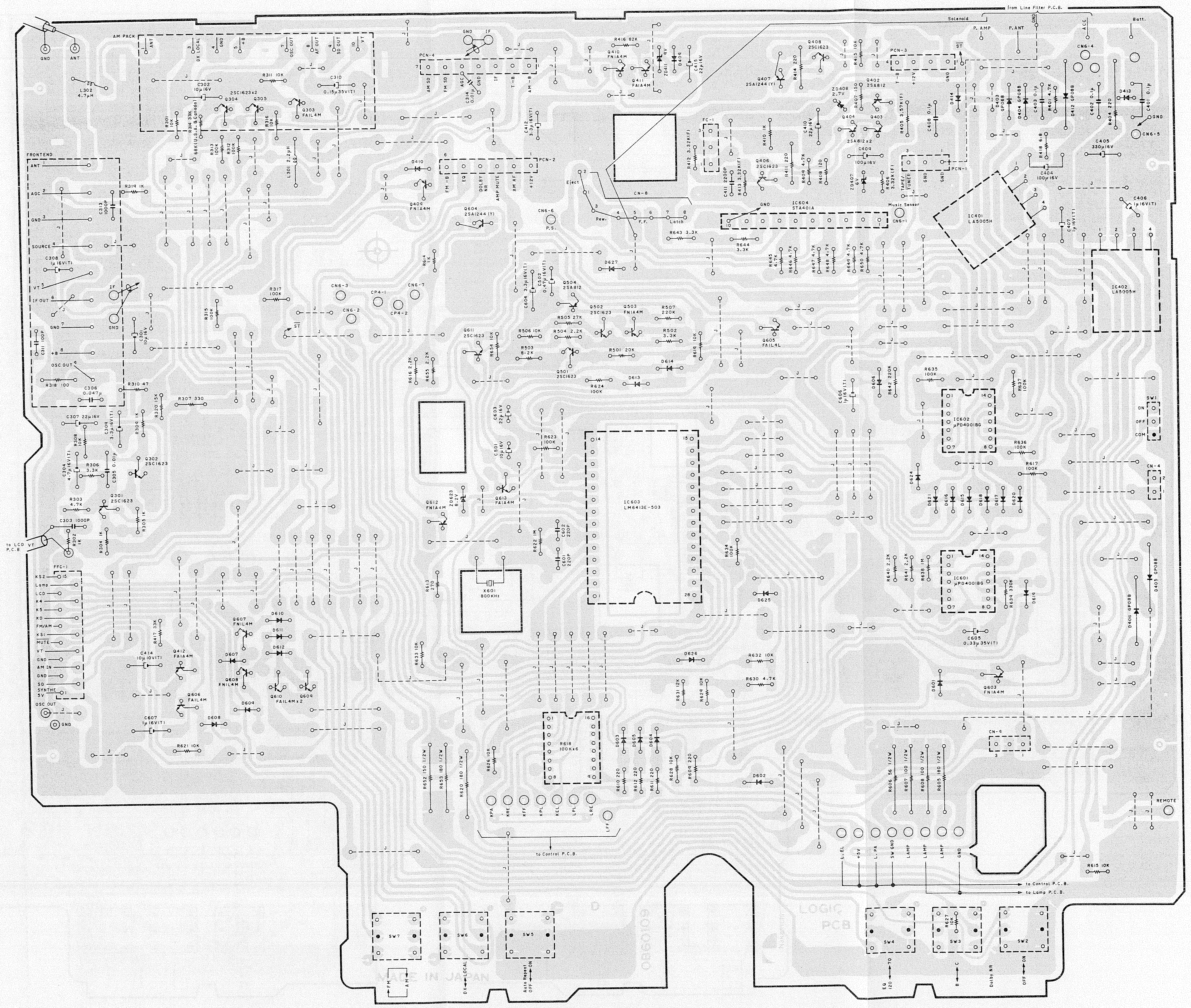

AM PACK
FRONTEND
ANT
AGC
GND
SOURCE
VT
IF OUT
+B
OSC OUT
L302 4.7μH
C302 10μ16V
2SC1623x2
Q304
Q305
Q303 FA1L4M
R311 10K
C310 0.15μ35V(T)
PCN-4
AM SD
FM SD
AGC
IF
T-B
AM-B
PCN-2
FM-B
EQ
DOLBY NR
AMP MUTE
AM AF
+12V
Q409 FN1A4M
D410
Q604 2SA1244(Y)
CN6-6
P.S.
CN6-3
CP4-1
CN6-7
CN6-2
CP4-2
R317 100K
Q502 2SC1623
Q503 FN1A4M
Q504 2SA812
Q501 2SC1623
Q611 2SC1623
R507 220K
R502 3.3K
R501 20K
R505 27K
R506 10K
R504 2.2K
R503 8.2K
D613
D614
R624 100K
D627
R643 3.3K
R644 3.3K
Eject
Rew.
F.F.
Latch
CN-8
IC604 STA401A
Music Sensor
CN5-1
R416 82K
Q410 FN1A4M
Q411 FA1A4M
C415 22μ16V
Q407 2SA1244(Y)
Q408 2SC1623
R414 220
Q402 2SA812
Q404
Q403
2SA812x2
ZD408 2.7V
ZD407 6V
C409 100μ16V
PCN-3
PCN-1
FC-1
TAPE/TUNER
R412 3.3K(F)
R413 3.3K(F)
C411 2200P
Q406 2SC1623
P. AMP
P. ANT
Solenoid
from Line Filter P.C.B.
Batt.
ACC
CN6-4
CN6-5
C405 330μ16V
C404 100μ16V
C406 1μ16V(T)
IC401 LA5005H
IC402 LA5005H
D403 GP08B
D404 GP08B
D412 GP08B
D413
R418 6.8
SW1
ON
OFF
COM
CN-4
IC602 μPD4001BG
IC601 μPD4001BG
R635 100K
R637 100K
R636 100K
R617 100K
C606 1μ16V(T)
R642 220K
D624
D621
D615
D616
D618
D617
D619
D620
R640 2.2K
R641 2.2K
R638 1M
R639 330K
D405 GP08B
D406 GP08B
C605 0.33μ35V(T)
Q603 FN1A4M
D601
CN-9
REMOTE
R615 10K
to Control P.C.B.
to Lamp P.C.B.
L.EL
+5V
L.PA
SW GND
LAMP
GND
SW4
SW3
SW2
R627 10K
EQ 120 70
Dolby NR
OFF ON
IC603 LM6413E-503
X601 800KHz
C603 22μ16V
C501 10μ16V
R623 100K
Q613 FA1A4M
Q612 FN1A4M
ZD623
R622 1M
C602 220P
C601 220P
R613 27Ω
R634 100K
D625
D626
R632 10K
R630 4.7K
R631 12K
R629 10K
R618 100Kx6
D603
D605
D604
D602
R610 220
R612 220
R628 10K
R608 220
R606 56 1/2W
R607 100 1/2W
R609 100 1/2W
R605 180 1/2W
R652 150 1/2W
R653 180 1/2W
R620 180 1/2W
R626 10K
KPA
KRE
KFF
KPL
KEL
LPL
LRE
LFF
to Control P.C.B.
SW7
SW6
SW5
FM AM
DX LOCAL
Auto Repeat OFF ON
LOGIC PCB
MADE IN JAPAN
FFC-1
KS2
Lamp
LCD
K4
K5
K0
FM/AM
KS1
MUTE
VT
GND
AM IN
GND
SD
SYNTHE 5V
to LCD VT P.C.B.
C313 1000P
C308 1μ16V(T)
R319 1K
C311 100P
C306 0.047μ
R318 100
R310 47
C301 10μ16V
C307 22μ16V
C309 3.3μ16V(T)
R308 10K
R309 1K
R320 15K
R307 330
C304 4.7μ16V(T)
R306 3.3K
C305 0.01μ
Q302 2SC1623
R303 4.7K
Q301 2SC1623
C303 1000P
R302 1K
R304 1K
R305 1K
R315 100K
Q607 FN1L4M
Q608 FN1L4M
Q606 FA1A4M
Q412 FA1A4M
Q609
Q610 FA1L4M x2
D606
D607
D608
D609
D610
D611
D612
C414 10μ10V(T)
C607 1μ16V(T)
R621 10K
R417 3.3K
R633 10K
R614 1K
R616 2.2K
R655 2.2K
R654 10K
R619 10K
Q605 FA1L4L

Fig. 8.13.2 C60405146 - 06400 (TD-500 & TD-500E)
C60601390 - (TD-500D)

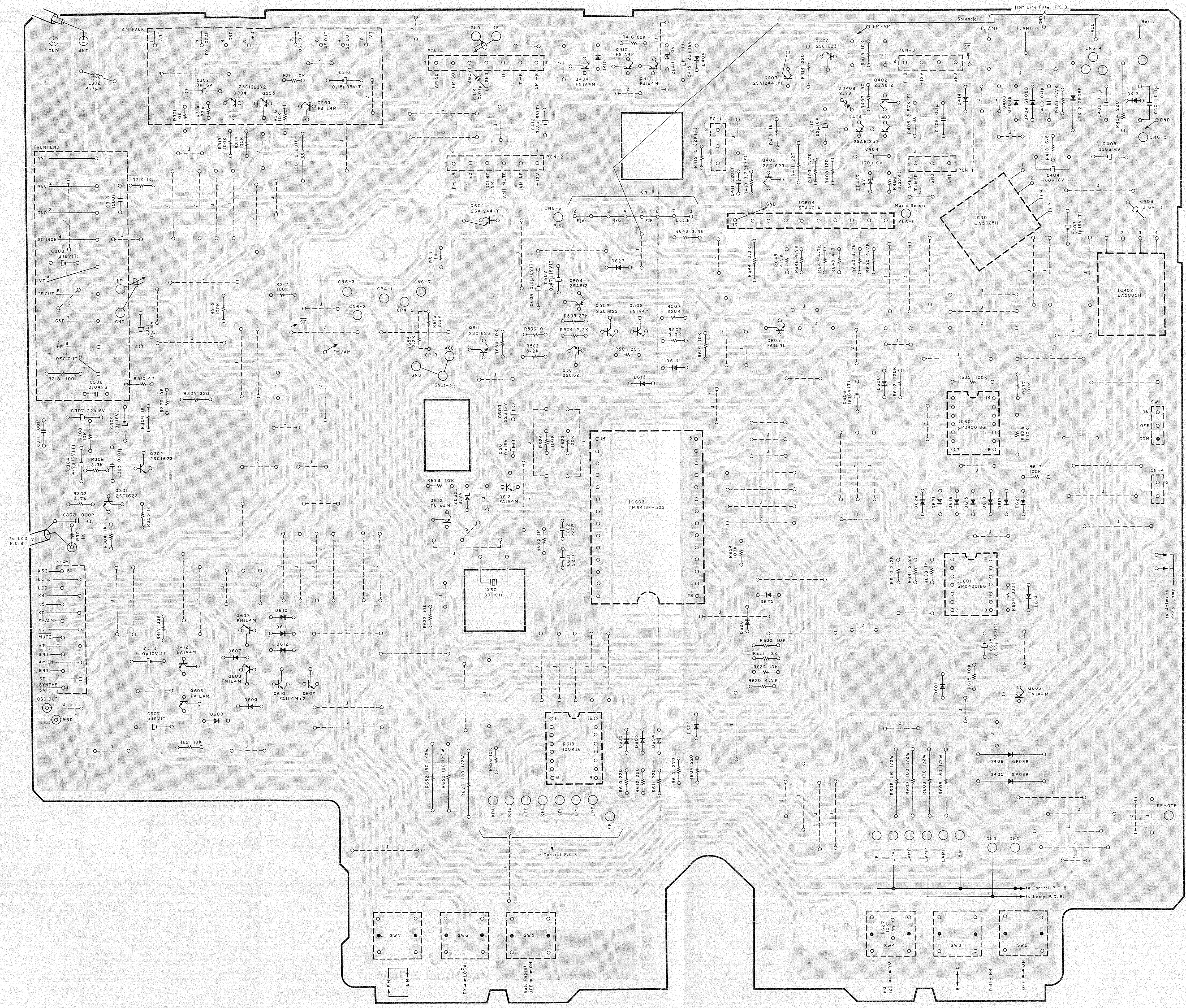

AM PACK
FRONTEND
ANT
GND
ASC
SOURCE
VT
IF OUT
+B
OSC OUT
PCN-4
PCN-2
PCN-3
PCN-1
CN-8
CN6-6
Eject
Rew.
F.F.
Lctch
IC604 STA401A
Music Sensor
IC401 LA5005H
IC402 LA5005H
IC603 LM6413E-503
IC602 μPD4001BG
IC601 μPD4001BG
X601 800KHz
R618 100K×6
CP-3
Shut-off
FM/AM
SW1
ON
OFF
COM
CN-4
FFC-1
to LCD VT P.C.B
Solenoid
from Line Filter P.C.B.
Batt.
P. AMP
P. ANT
ACC
REMOTE
to Control P.C.B.
to Lamp P.C.B.
to Allmatic Knob Lamp
SW7
SW6
SW5
SW4
SW3
SW2
FM AM
DX LOCAL
Auto Repeat OFF ON
EQ 120 70
B C
Dolby NR
OFF ON
LOGIC PCB
MADE IN JAPAN
0B60109

Fig. 8.13.3 C60401001 - 05145 (TD-500 & TD-500E)
C60601001 - 01389 (TD-500D)

Schematic Ref. No.	Part No.	Description
	BA05406A	Logic P.C.B. Ass'y TD-500 (Japan)
	BA05426A	Logic P.C.B. Ass'y TD-500 (U.S.A. & Canada)
	BA05449A	Logic P.C.B. Ass'y TD-500 (Australia & Others) & TD-500E
	BA05450A	Logic P.C.B. Ass'y TD-500D Serial Nos.: C60401001 - 05145 C60601001 - 01389
	— CPU —	
IC601,602	0B11063A	IC µPD4001BG
IC603	0B11061A	IC LM6413E-503
IC604	0B10048A	IC STA401A
Q603,612	0B14153A	TR FN1A4M
Q604	0B10017A	TR 2SA1244 (Y)
Q605	0B14149A	TR FA1L4L
Q606,609 610	0B14146A	TR FA1L4M
Q607,608	0B14151A	TR FN1L4M
Q611	0B14022A	TR 2SC1623
Q613	0B14144A	TR FA1A4M
ZD623	0B13024A	ZD 8.2V RLZ8.2CTE-11
D601-621 624-627	0B13064A	SiD MA221 (25)
X601	0B02307A	Crystal 800kHz
R605,620 653	0B24035A	RF 180 1/2W J
R606	0B24041A	RF 56 1/2W J
R607,608	0B09907A	RF 100 1/2W J
R609,610 611,612	0B23057A	RK 220 1/8W J
R613	0B23059A	RK 270 1/8W J
R614	0B23073A	RK 1K 1/8W J
R615,619 621,626 627,628 629,632 633,654	0B23097A	RK 10K 1/8W J
R616,640 641,655	0B23081A	RK 2.2K 1/8W J
R617,623 624,634 635,636 637	0B23121A	RK 100K 1/8W J
R618	0B21001A	R-Network 100Kx6
R622,638	0B23145A	RK 1M 1/8W J
R630 645-650	0B23089A	RK 4.7K 1/8W J (7)
R631	0B23099A	RK 12K 1/8W J
R639	0B23133A	RK 330K 1/8W J
R642	0B23129A	RK 220K 1/8W J
R643,644	0B23085A	RK 3.3K 1/8W J
R652	0B24040A	RF 150 1/2W J
C601,602	0B43048A	CC 220P 50V K
C603	0B40163A	CE 22µ 16V
C604	0B43028A	CT 3.3µ 16V
C605	0B43037A	CT 0.33µ 35V
C606,607	0B43025A	CT 1µ 16V
SW1-5	0B70018A	Push Switch
SW6	0B70021A	Slide Switch
SW7	0B70019A	Push Switch
CN4	0B81025A	2P-T Post
FFC1	0B81279A	15P FFC Connector
	— Regulator —	
IC401,402	0B11034A	IC LA5005H
Q402,403 404	0B14027A	TR 2SA812
Q406,408	0B14022A	TR 2SC1623
Q407	0B10017A	TR 2SA1244 (Y)
Q409,410	0B14153A	TR FN1A4M
Q411,412	0B14144A	TR FA1A4M
ZD407	0B13014A	ZD 6V PLZ6.2BTE-11
ZD408	0B14121A	ZD 2.7V RD2.7MB-T1A
ZD411	0B13026A	ZD 9V RLZ9.1BTE-11
D403,404 405,406 412	0B06109A	SiD GP08B
D409,410	0B13003A	SiD RLS-73
D413,414	0B13064A	SiD MA221
R401,409	0B23089A	RK 4.7K 1/8W J
R404	0B01933A	RK 220 1/4W J
R405	0B26012A	RM 3.57K 1/8W F
R406,412 413	0B26013A	RM 3.32K 1/8W F
R407	0B23053A	RK 150 1/8W J
R408	0B23051A	RK 120 1/8W J
R410	0B23073A	RK 1K 1/8W J
R411,414	0B23150A	RK 220 1/4W J
R415	0B23097A	RK 10K 1/8W J
R416	0B23119A	RK 82K 1/8W J
R417	0B23109A	RK 33K 1/8W J
R418	0B23021A	RK 6.8 1/8W J
C401,402 408	0B09292A	CC 0.1µ 50V Z
C403	0B43054A	CC 0.1µ 50V Z
C404,409	0B40206A	CE 100µ 16V
C405	0B40080A	CE 330µ 16V
C406,407	0B43025A	CT 1µ 16V
C410,415	0B40163A	CE 22µ 16V
C411	0B43051A	CC 2200P 50V K
C412	0B43028A	CT 3.3µ 16V
C414	0B43020A	CT 10µ 10V
	— Reset —	
Q501,502	0B14022A	TR 2SC1623
Q503	0B14153A	TR FN1A4M
Q504	0B14027A	TR 2SA812
R501	0B23104A	RK 20K 1/8W J
R502	0B23085A	RK 3.3K 1/8W J
R503	0B23095A	RK 8.2K 1/8W J
R504	0B23081A	RK 2.2K 1/8W J
R505	0B23107A	RK 27K 1/8W J
R506	0B23097A	RK 10K 1/8W J
R507	0B23129A	RK 220K 1/8W J
C501	0B40162A	CE 10µ 16V
C502	0B43023A	CT 0.47µ 16V
	— Tuner —	
Q301,302 304,305	0B14022A	TR 2SC1623
Q303	0B14146A	TR FA1L4M
L301	0B51106A	Micro Coil 2.2µH
L302	0B51011A	Micro Coil 4.7µH
R301,308 311,316	0B23097A	RK 10K 1/8W J
R302,304 305,309 319	0B23073A	RK 1K 1/8W J
R303	0B23089A	RK 4.7K 1/8W J
R306	0B23085A	RK 3.3K 1/8W J
R307	0B23061A	RK 330 1/8W J
R310	0B23041A	RK 47 1/8W J
R312,313 315,317	0B23121A	RK 100K 1/8W J
R314	0B23109A	RK 33K 1/8W J
R318	0B09653A	RK 100 1/6W J
R320	0B23101A	RK 15K 1/8W J
C301,302	0B40162A	CE 10µ 16V
C303	0B43050A	CC 1000P 50V K
C304	0B40280A	CT 4.7µ 16V
C305	0B41094A	CM 0.01µ 50V J
C306	0B43053A	CC 0.047µ 50V K
C307	0B40163A	CE 22µ 16V
C308	0B43025A	CT 1µ 16V
C309	0B40279A	CT 3.3µ 16V
C310	0B43035A	CT 0.15µ 35V
C311	0B43047A	CC 100P 50V K
C313	0B41082A	CM 1000P 50V J
C314	0B43052A	CC 0.01µ 50V K
	0B91005A	AM Pack (1)
	0B91006A	Front-end TD-500 (Australia & Others), TD-500E & TD-500D
	0B91004A	Front-end TD-500 (U.S.A. & Canada)
	0B91003A	Front-end TD-500 (Japan)
	— Miscellaneous —	
	0B60109C	Logic P.C.B.
CP3	0B82296A	3P Coupler
	0B81273B	4P Terminal (1)
	0B82290A	4P Connector (1)
	0B82291A	7P Connector (1)
	0B82298B	2P Coupler (1)
	0B82307C	7P-H Connector (1)
	0B82309B	8P-H Connector (1)
	0B82334A	3P Connector (1)
	0B82336A	6P Connector (1)
	0B90019A	SK Binder (1)
	0E00174A	Earth Lug B-4 (4)
	0B81272B	4P Terminal Male TD-500D (1)
	0B81273B	4P Terminal Female TD-500D (1)
	0B81268B	4P Terminal Male TD-500 & TD-500E (1)
	BA05501A	Line Filter P.C.B. Ass'y (1)
	BA05497A	Transistor P.C.B. Ass'y (1)

9. SCHEMATIC DIAGRAMS

9.1. IC Block Diagrams

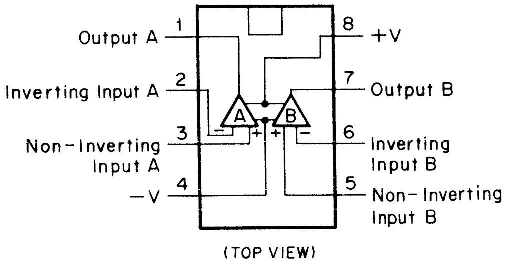

Output A
Inverting Input A
Non-Inverting Input A
−V
+V
Output B
Inverting Input B
Non-Inverting Input B
1
2
3
4
5
6
7
8
A
B
(TOP VIEW)

Fig. 9.1.1 Operational Amp. IC NJM4558M, NJM072, LF353N

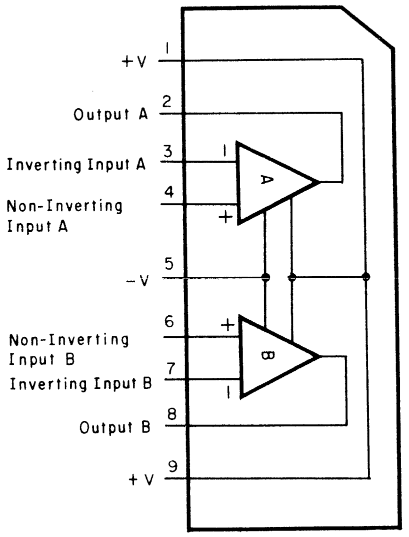

+V
Output A
Inverting Input A
Non-Inverting Input A
−V
Non-Inverting Input B
Inverting Input B
Output B
+V
1
2
3
4
5
6
7
8
9
A
B

Fig. 9.1.2 Operational Amp. IC NJM072S-E

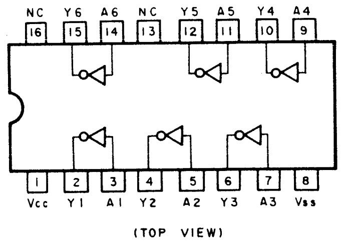

NC Y6 A6 NC Y5 A5 Y4 A4
16 15 14 13 12 11 10 9
1 2 3 4 5 6 7 8
Vcc Y1 A1 Y2 A2 Y3 A3 Vss
(TOP VIEW)

Fig. 9.1.3 Inverter C-MOS IC LC4049B

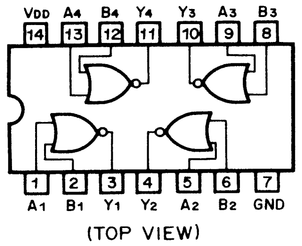

VDD A4 B4 Y4 Y3 A3 B3
14 13 12 11 10 9 8
1 2 3 4 5 6 7
A1 B1 Y1 Y2 A2 B2 GND
(TOP VIEW)

Fig. 9.1.4 NOR Gate C-MOS IC µPD4001BG

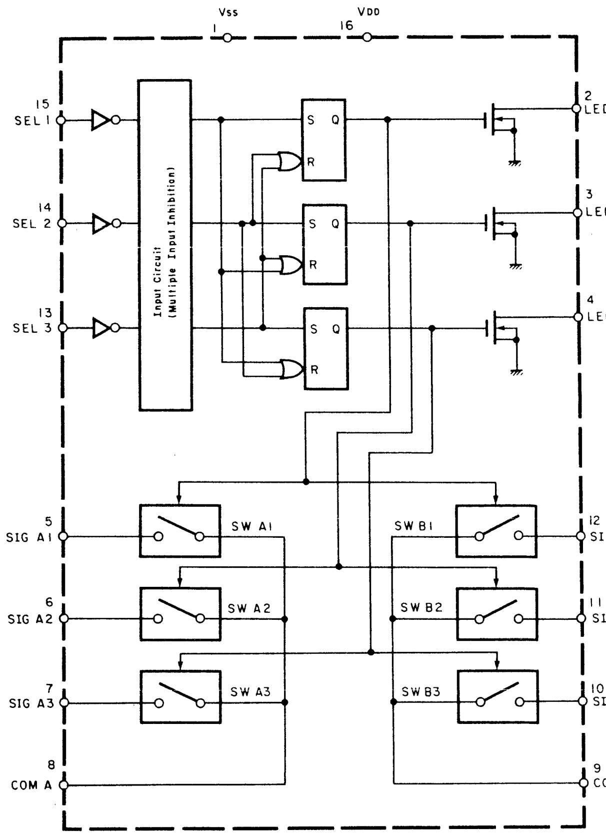

Vss
VDD
1
16
15 SEL 1
14 SEL 2
13 SEL 3
Input Circuit (Multiple Input Inhibition)
S Q
R
2 LED 1
3 LED 2
4 LED 3
5 SIG A1
6 SIG A2
7 SIG A3
8 COM A
SW A1
SW A2
SW A3
SW B1
SW B2
SW B3
12 SIG B1
11 SIG B2
10 SIG B3
9 COM B

Fig. 9.1.5 Analog Switch Selector TC9145P

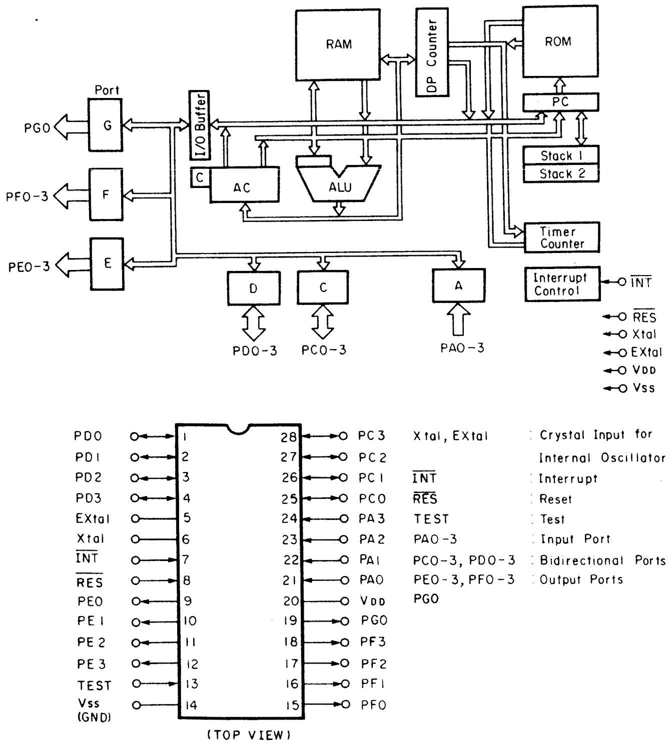
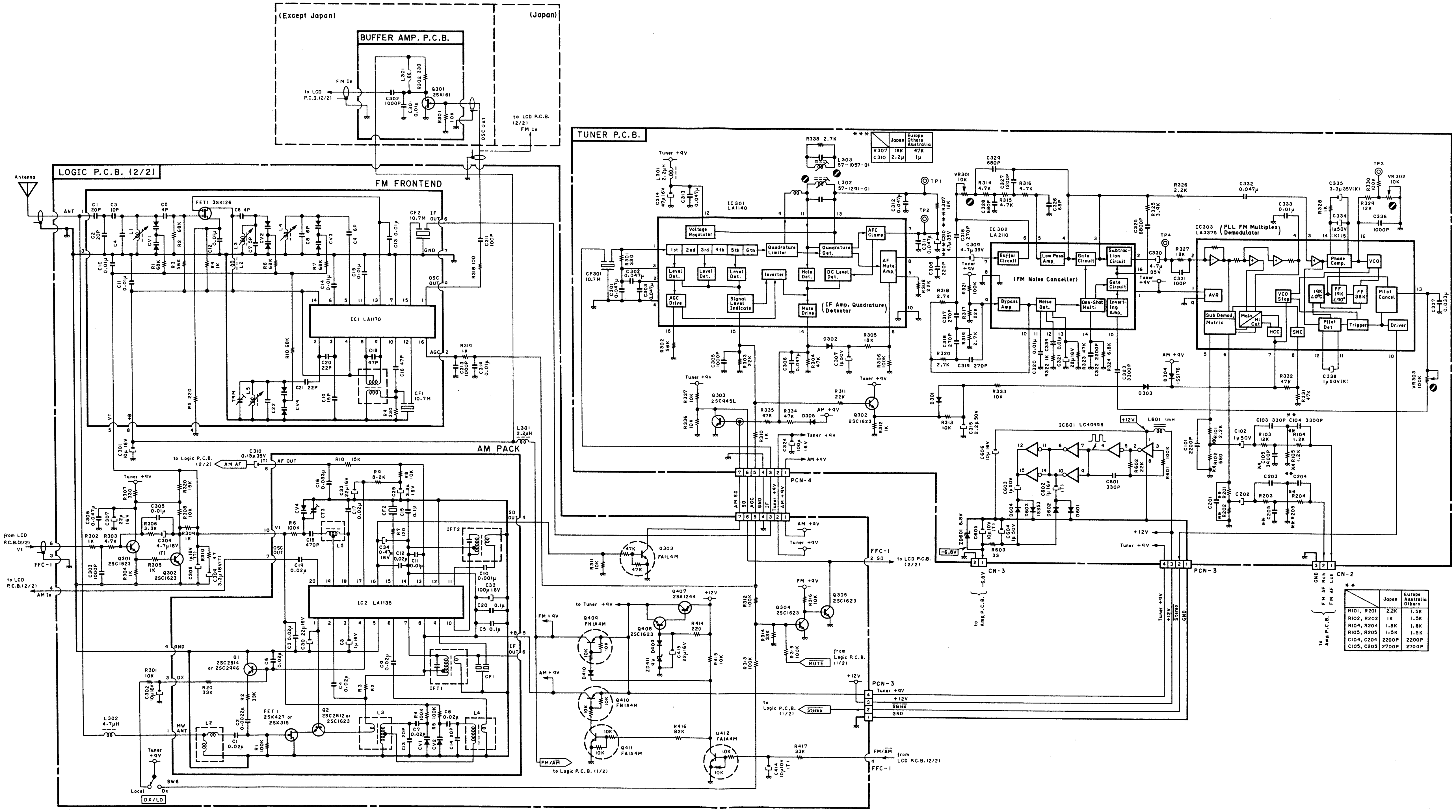

RAM
DP Counter
ROM
PC
Stack 1
Stack 2
Port
G
F
E
PG0
PF0-3
PE0-3
I/O Buffer
C
AC
ALU
Timer Counter
Interrupt Control
INT
D
C
A
PD0-3
PC0-3
PA0-3
RES
Xtal
EXtal
VDD
Vss
PD0 1
PD1 2
PD2 3
PD3 4
EXtal 5
Xtal 6
INT 7
RES 8
PE0 9
PE1 10
PE2 11
PE3 12
TEST 13
Vss (GND) 14
28 PC3
27 PC2
26 PC1
25 PC0
24 PA3
23 PA2
22 PA1
21 PA0
20 VDD
19 PG0
18 PF3
17 PF2
16 PF1
15 PF0
(TOP VIEW)
Xtal, EXtal : Crystal Input for Internal Oscillator
INT : Interrupt
RES : Reset
TEST : Test
PA0-3 : Input Port
PC0-3, PD0-3 : Bidirectional Ports
PE0-3, PF0-3 PG0 : Output Ports

Fig. 9.1.6 4-Bit Micro-processor LM6413E-503

9.2. Schematic Diagrams

(1) Tuner Section


(Except Japan)
(Japan)
BUFFER AMP. P.C.B.
TUNER P.C.B.
LOGIC P.C.B. (2/2)
FM FRONTEND
AM PACK
Antenna
IC1 LA1170
IC2 LA1135
IC301 LA1140
IC302 LA2110
IC303 LA3375
IC601 LC4049B
(PLL FM Multiplex Demodulator)
(FM Noise Canceller)
(IF Amp. Quadrature Detector)
PCN-3
PCN-4
CN-2
CN-3
FFC-1
GND
FM AF Rch
FM AF Lch
to Amp. P.C.B.
DX/LO

***

	Japan	Europe Others Australia
R307	18K	47K
C310	2.2μ	1μ

**

	Japan	Europe Australia Others
R101, R201	2.2K	1.5K
R102, R202	1K	1.5K
R104, R204	1.8K	1.8K
R105, R205	1.5K	1.5K
C104, C204	2200P	2200P
C105, C205	2700P	2700P

Fig. 9.2.1.1 TD-500E, TD-500D & TD-500 (Australia, Others & Japan)

Notes: 1. Diode is MA221 or RLS-73 unless otherwise specified.
2. 2SC945, 2SC536SP, 2SC2458 and 2SC2785 are interchangeable with each other.

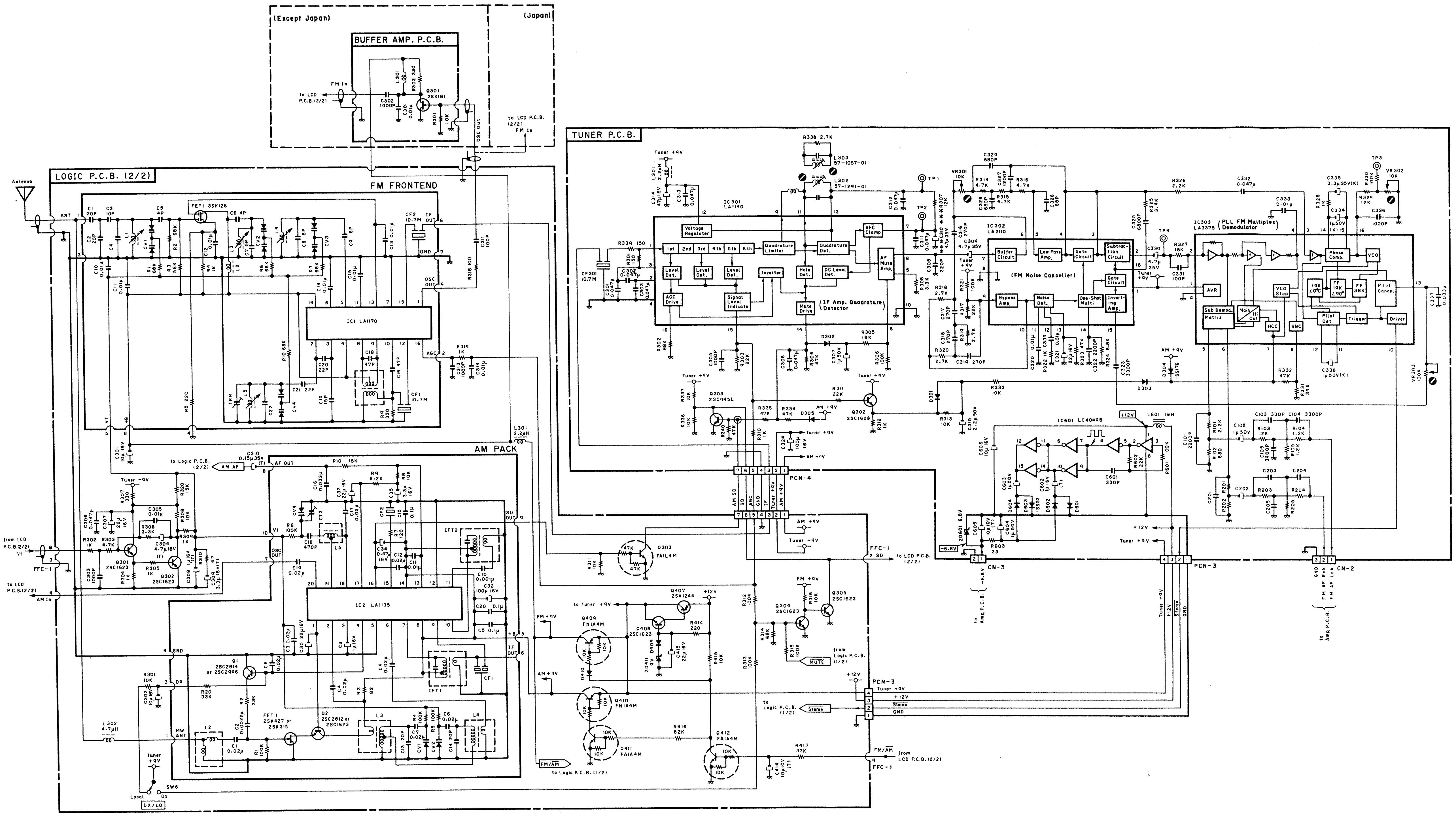
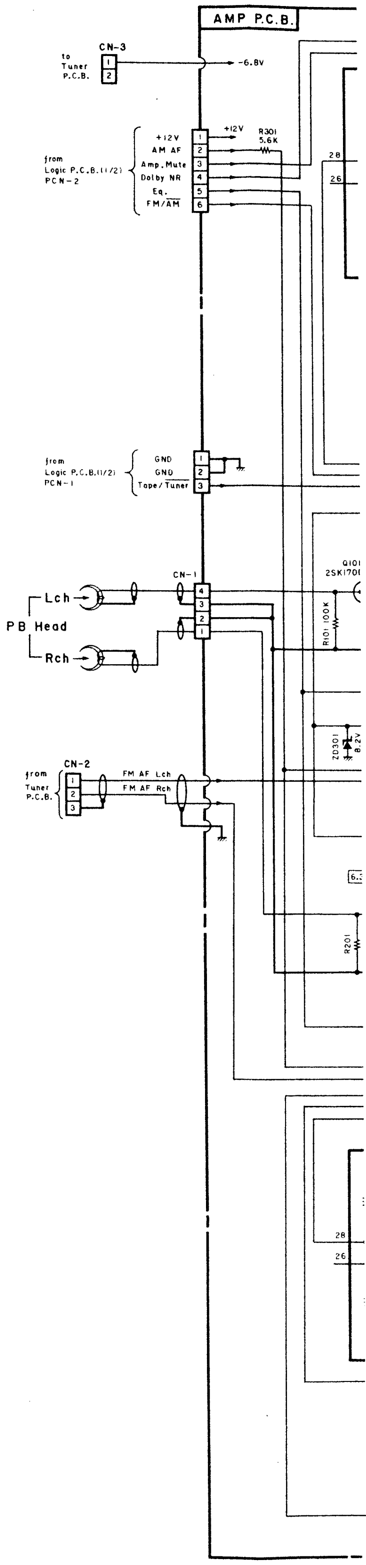

(Except Japan)
(Japan)
BUFFER AMP. P.C.B.
FM In
to LCD P.C.B.(2/2)
to LCD P.C.B. (2/2) FM In
Q301 2SK161
LOGIC P.C.B. (2/2)
FM FRONTEND
Antenna
ANT
FET1 3SK126
IC1 LA1170
CF1 10.7M
CF2 10.7M
IF OUT
OSC OUT
AGC
AM PACK
IC2 LA1135
to Logic P.C.B. (2/2)
AM AF
AF OUT
from LCD P.C.B.(2/2) VT
FFC-1
to LCD P.C.B.(2/2) AM In
Q301 2SC1623
Q302 2SC1623
Q1 2SC2814 or 2SC2666
FET1 2SK427 or 2SK315
Q2 2SC2812 or 2SC1623
MW ANT
DX
GND
SW6
Local
Dx
DX/LO
FM/AM
to Logic P.C.B. (1/2)
TUNER P.C.B.
IC301 LA1140
Voltage Regulator
1st
2nd
3rd
4th
5th
6th
Quadrature Limiter
Quadrature Det.
AFC Clamp
AF Mute Amp.
Level Det.
AGC Drive
Signal Level Indicate
Inverter
Noise Det.
DC Level Det.
Mute Drive
(IF Amp. Quadrature Detector)
IC302 LA2110
Buffer Circuit
Low Pass Amp.
Gate Circuit
Subtraction Circuit
(FM Noise Canceller)
Bypass Amp.
Noise Det.
One-Shot Multi.
Inverting Amp.
IC303 LA3375 (PLL FM Multiplex Demodulator)
AVR
Sub Demod. Matrix
Main Cut
HCC
SNC
VCO Stop
Pilot Det
Trigger
Driver
Phase Comp.
VCO
Pilot Cancel
TP1
TP2
TP3
TP4
IC601 LC4049B
Q303 2SC945L
Q302 2SC1623
Q303 FA1L4M
Q304 2SC1623
Q305 2SC1623
Q407 2SA1244
Q408 2SC1623
Q409 FN1A4M
Q410 FN1A4M
Q411 FA1A4M
Q412 FA1A4M
PCN-4
PCN-3
CN-3
CN-2
AM SD
AGC
GND
IF
Tuner +9V
AM +9V
FM +9V
+12V
Stereo
MUTE
to Amp. P.C.B.
from Logic P.C.B. (1/2)
to Logic P.C.B. (1/2)
from LCD P.C.B. (2/2)
to LCD P.C.B. (2/2)
FM AF Rch
FM AF Lch
-6.8V

Fig. 9.2.1.2 TD-500 (U.S.A. & Canada)

(2) Amplifier Section


AMP P.C.B.
CN-3
to Tuner P.C.B.
-6.8V
from Logic P.C.B.(1/2) PCN-2
+12V
AM AF
Amp. Mute
Dolby NR
Eq.
FM/AM
R301 5.6K
from Logic P.C.B.(1/2) PCN-1
GND
Tape/Tuner
CN-1
Lch
Rch
PB Head
CN-2
from Tuner P.C.B.
FM AF Lch
FM AF Rch
Q101 2SK170

Notes: 1. Diode is MA221 or RLS-73 unless otherwise specified.
2. 2SC945, 2SC536SP, 2SC2458 and 2SC2785 are interchangeable with each other.

(2) Amplifier Section

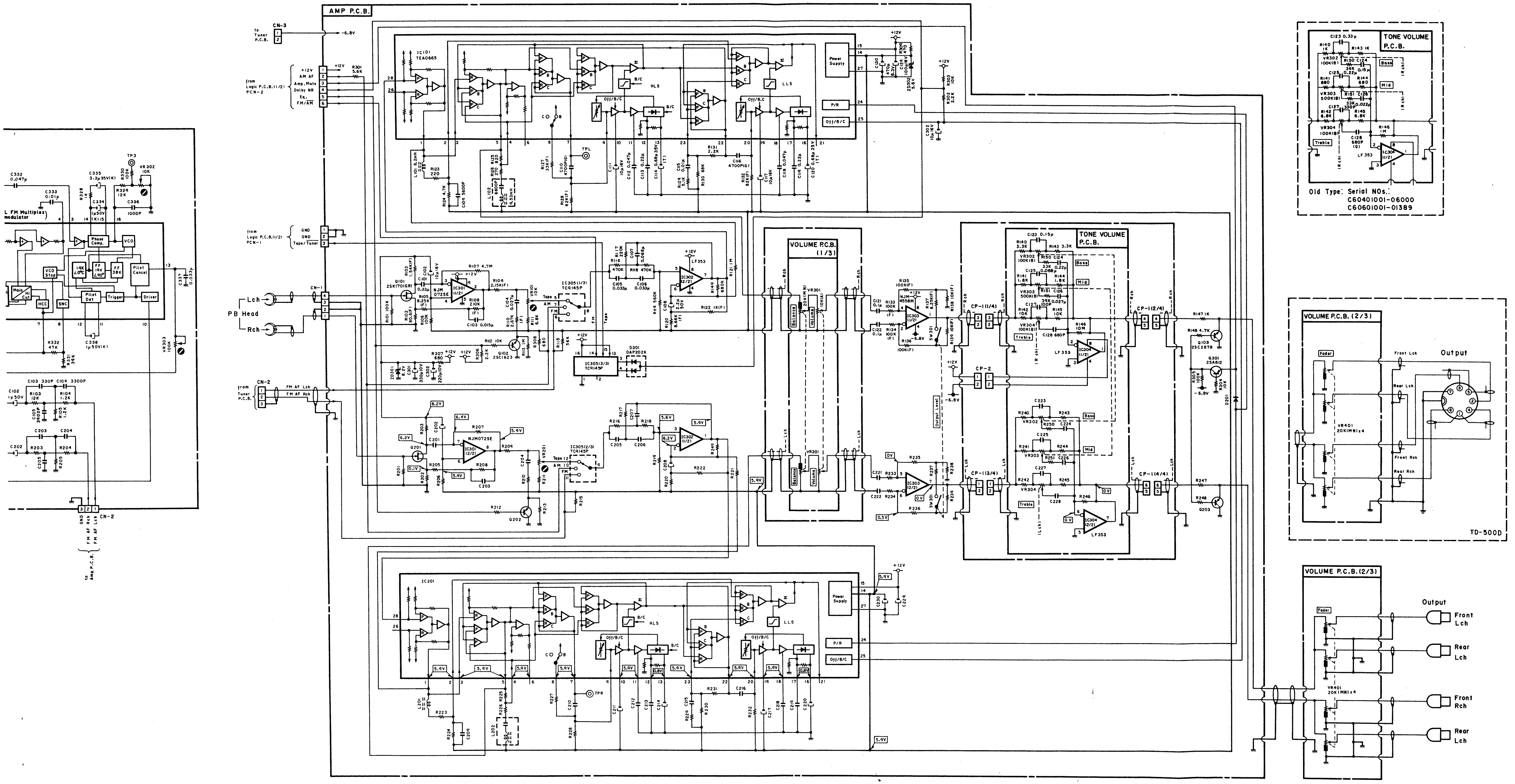
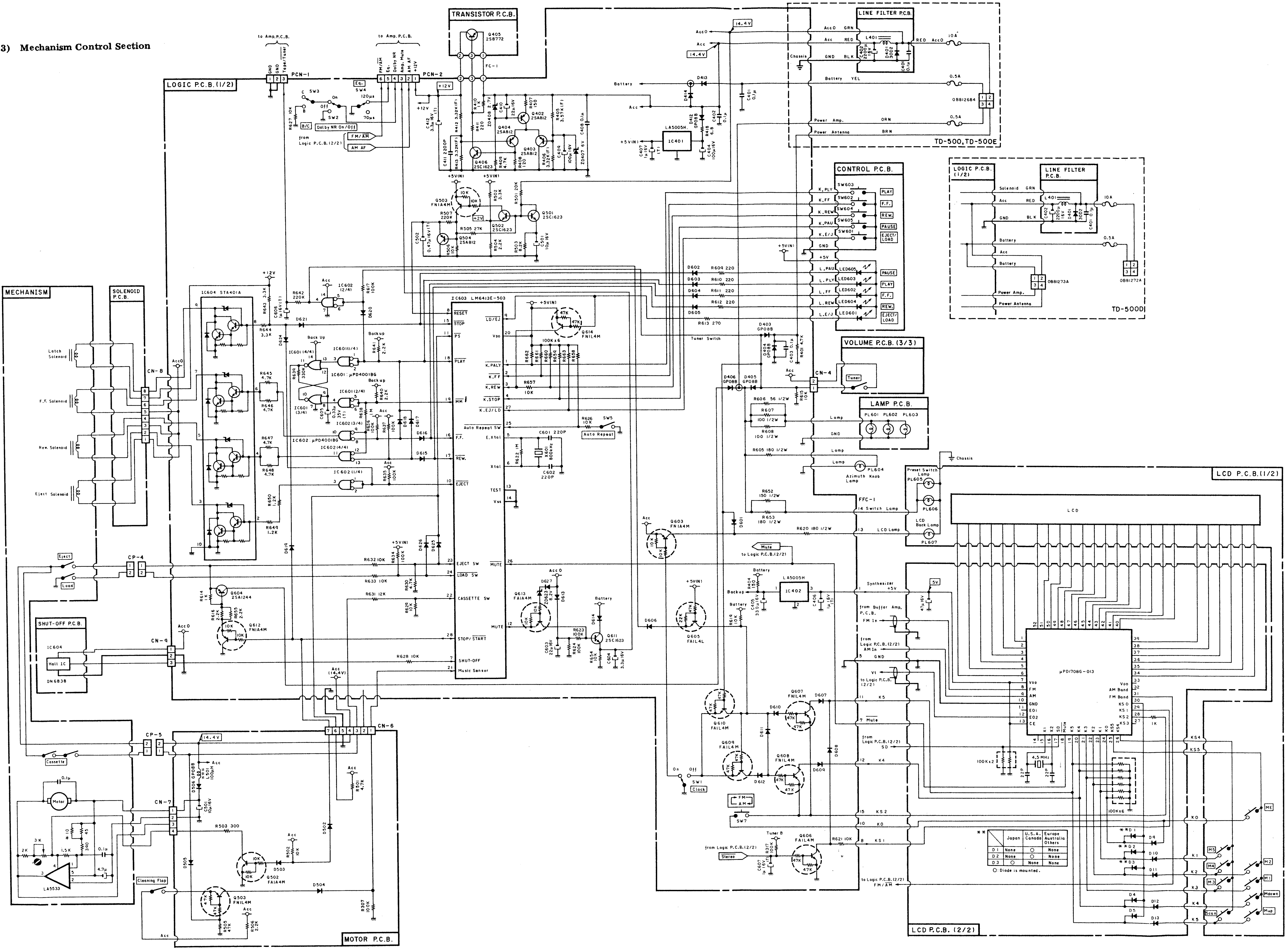
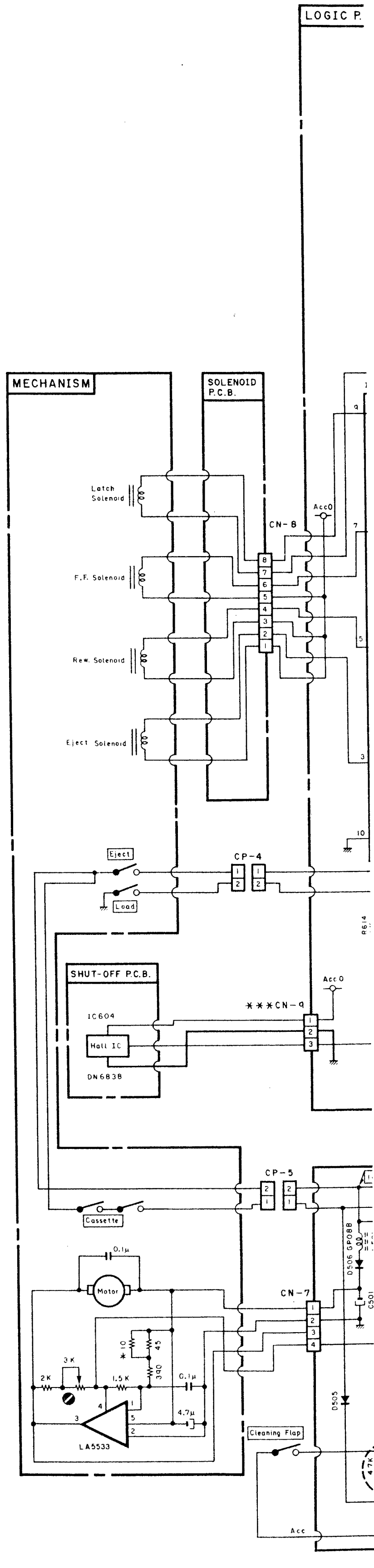

AMP P.C.B.
CN-3
to Tuner P.C.B.
-6.8V
from Logic P.C.B.(1/2) PCN-2
+12V
AM AF
Amp. Mute
Dolby NR
Eq.
FM/AM
IC101 TEA0665
Power Supply
HLS
LLS
B/C
Off/B/C
P/R
TPL
from Logic P.C.B.(1/2) PCN-1
GND
GND
Tape/Tuner
CN-1
PB Head
Lch
Rch
IC301 NJM 0725E
IC302 LF353
IC305(1/3) TC9145P
IC305(3/3) TC9145P
D301 DAP202K
Q101 2SK170(GR)
Q102 2SC1623
CN-2
from Tuner P.C.B.
FM AF Lch
FM AF Rch
IC201
TPR
Q201
Q202
IC305(2/3) TC9145P
VOLUME P.C.B. (1/3)
VR301
Balance
Volume
IC303 NJM 4558M
SW301
Output Level
CP-1(1/4)
CP-1(2/4)
CP-1(3/4)
CP-1(4/4)
CP-2
TONE VOLUME P.C.B.
Bass
Mid
Treble
IC304 LF353
Q103 2SC2878
Q301 2SA812
Q203
D201
VOLUME P.C.B. (2/3)
Fader
VR401 20K(MN)x4
Output
Front Lch
Rear Lch
Front Rch
Rear Rch
TD-500D
Old Type: Serial NOs.:
C60401001-06000
C60601001-01389
L FM Multiplex
Phase Comp.
VCO
VCO Stop
Pilot Cancel
Pilot Det
Trigger
Driver
HCC
SNC
Main Hi Cut
CN-2
to Amp P.C.B.

Fig. 9.2.2

se specified.
35 are interchangeable with each other.

(3) Mechanism Control Section

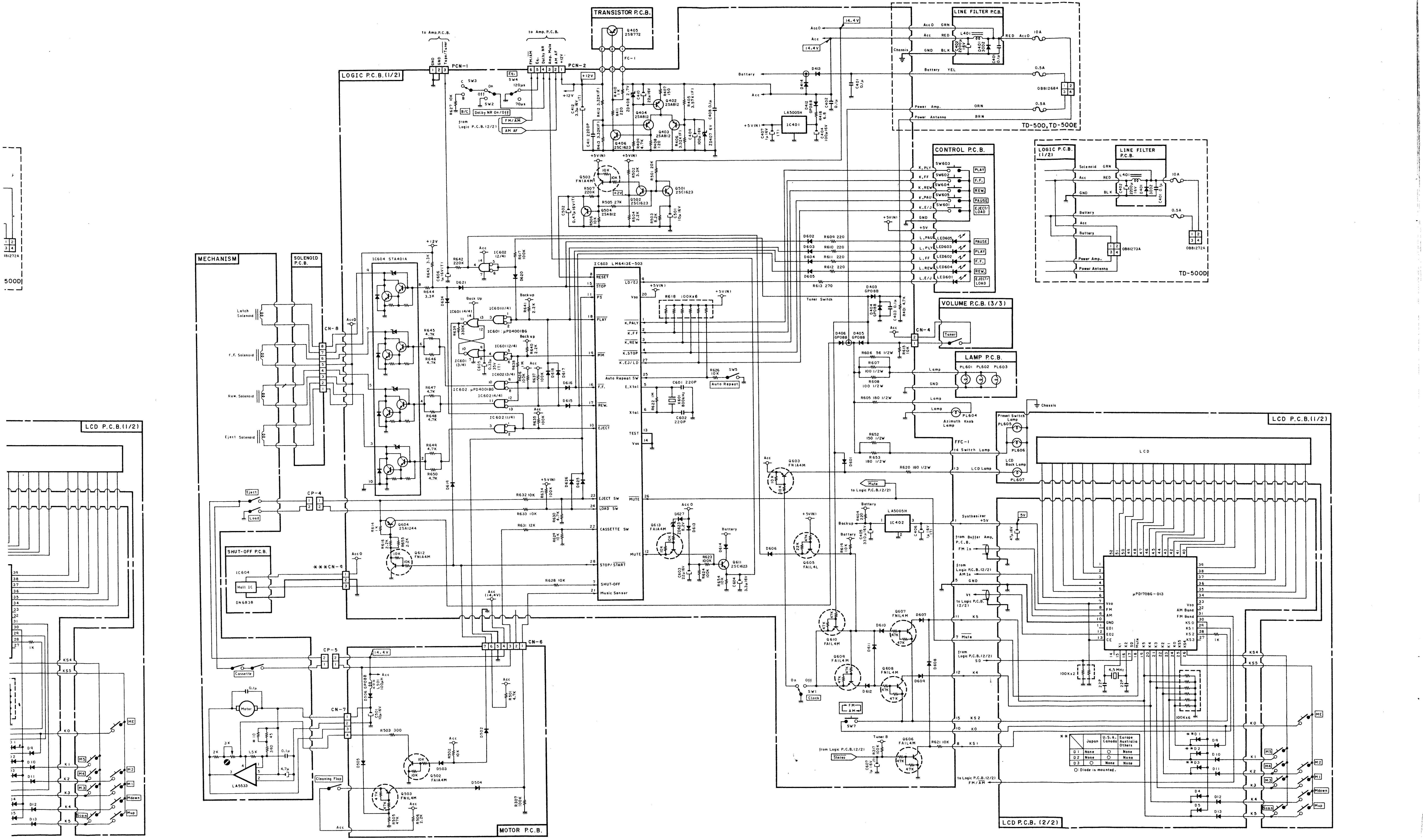

TRANSISTOR P.C.B.
LINE FILTER P.C.B.
LOGIC P.C.B. (1/2)
PCN-1
PCN-2
to Amp.P.C.B.
CONTROL P.C.B.
VOLUME P.C.B. (3/3)
LAMP P.C.B.
LCD P.C.B. (1/2)
LCD P.C.B. (2/2)
MECHANISM
SOLENOID P.C.B.
SHUT-OFF P.C.B.
MOTOR P.C.B.
IC603 LM6413E-503
IC604 STA401A
μPD1708G-013
LA5005H
LA5533
TD-500, TD-500E
TD-500D
Latch Solenoid
F.F. Solenoid
Rew. Solenoid
Eject Solenoid
CN-8
CN-9
CN-6
CN-7
CP-4
CP-5
CN-4
FFC-1
** | Japan | U.S.A. Canada | Europe Australia Others
D1 | None | ○ | None
D2 | None | ○ | None
D3 | ○ | None | None
○: Diode is mounted.


LOGIC P.
MECHANISM
SOLENOID P.C.B.
SHUT-OFF P.C.B.
***CN-9
CP-4
CP-5
CN-7
LA5533

Note: Diode is MA221 or RLS-73 unless otherwise specified.

Fig. 9.2.3.1 C60406401 - (TD-500 & TD-500E)

***: 3P coupler (CP-3) is used for the Models bea
C60401001 - 05145 (TD-500 & TD-500E)


TRANSISTOR P.C.B.
LOGIC P.C.B. (1/2)
PCN-1
PCN-2
to Amp.P.C.B.
LINE FILTER P.C.B.
TD-500, TD-500E
CONTROL P.C.B.
LINE FILTER P.C.B.
TD-500D
VOLUME P.C.B. (3/3)
LAMP P.C.B.
MECHANISM
SOLENOID P.C.B.
Latch Solenoid
F.F. Solenoid
Rew. Solenoid
Eject Solenoid
IC604 STA401A
IC603 LM6413E-503
IC601 μPD4001BG
IC602 μPD4001BG
LA5005H
SHUT-OFF P.C.B.
Hall IC
DN6838
CN-8
CN-9
CP-4
CP-5
CN-6
CN-7
MOTOR P.C.B.
LA5533
Cleaning Flap
LCD P.C.B. (1/2)
LCD P.C.B. (2/2)
LCD
μPD1708G-013
4.5MHz
Chassis

**

	Japan	U.S.A. Canada	Europe Australia Others
D1	None	○	None
D2	None	○	None
D3	○	None	None

○: Diode is mounted.

***: 3P coupler (CP-3) is used for the Models bearing the following serial Nos.:
C60401001 - 05145 (TD-500 & TD-500E) & C60601001 - 01389 (TD-500D)

Fig. 9.2.3.2 C60401001 - 06400 (TD-500 & TD-500E)
C60601001 - (TD-500D)

10. WIRING DIAGRAMS

Notes: 1 Table of wire colors

BRN	Brown	BLU	Blue
RED	Red	VIO	Violet
ORN	Orange	GRY	Gray
YEL	Yellow	WHT	White
GRN	Green	BLK	Black

2. Component side view of the P.C.B. is illustrated unless otherwise specified.

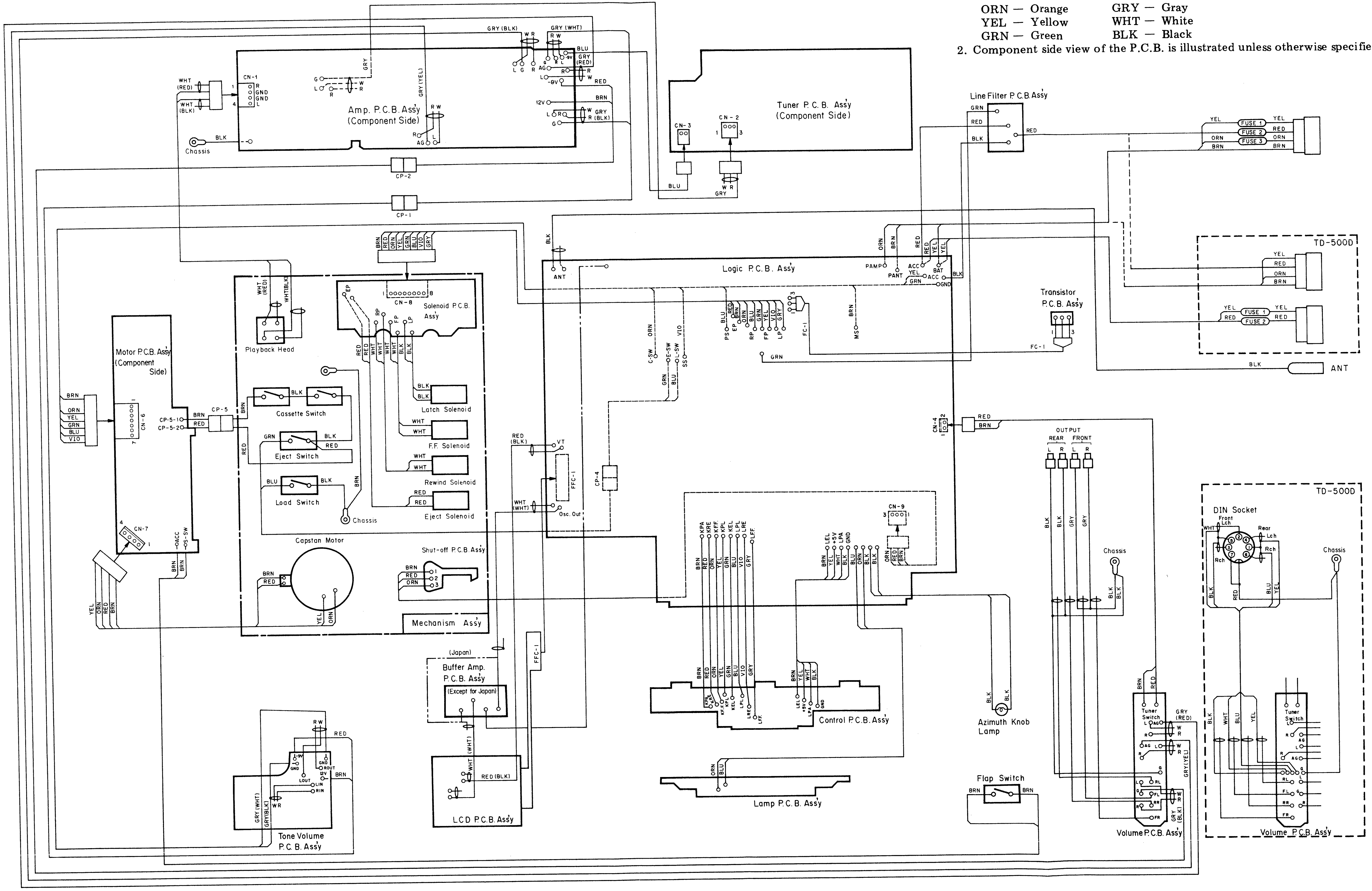

Amp. P.C.B. Ass'y (Component Side)
CN-1
GND
GND
WHT (RED)
WHT (BLK)
BLK
Chassis
GRY (BLK)
GRY (WHT)
GRY
GRY (YEL)
BLU
GRY (RED)
RED
BRN
12V
-8V
-9V
W GRY
R (BLK)
CP-2
CP-1
Tuner P.C.B. Ass'y (Component Side)
CN-3
CN-2
BLU
GRY
Line Filter P.C.B. Ass'y
GRN
RED
BLK
YEL
FUSE 1
FUSE 2
FUSE 3
ORN
TD-500D
ANT
Transistor P.C.B. Ass'y
FC-1
Logic P.C.B. Ass'y
PAMP
PANT
ACC
BAT
GND
C-SW
E-SW
L-SW
SS
PS
EP
RP
FP
LP
MS
GRN
CN-4
Motor P.C.B. Ass'y (Component Side)
CN-6
CN-7
CP-5-1
CP-5-2
CP-5
ACC
S-SW
Playback Head
CN-8
Solenoid P.C.B. Ass'y
Cassette Switch
Eject Switch
Load Switch
Latch Solenoid
F.F. Solenoid
Rewind Solenoid
Eject Solenoid
Chassis
Capstan Motor
Shut-off P.C.B. Ass'y
Mechanism Ass'y
VT
FFC-1
Osc. Out
CP-4
CN-9
KPA KRE KFF KPL KEL LPL LRE LFF
LEL +5V LPA GND
OUTPUT
REAR FRONT
L R L R
Chassis
DIN Socket
Front Lch
Rear Lch
Rch
(Japan)
Buffer Amp. P.C.B. Ass'y
(Except for Japan)
FFC-1
LCD P.C.B. Ass'y
RED (BLK)
WHT (WHT)
Control P.C.B. Ass'y
Lamp P.C.B. Ass'y
Azimuth Knob Lamp
Flap Switch
Tuner Switch
Volume P.C.B. Ass'y
GRY (RED)
GRY (YEL)
GRY (BLK)
Tone Volume P.C.B. Ass'y
GRY (WHT)
GRY (BLK)
LOUT
ROUT
LIN
RIN

Fig. 10.1 C60405146 - (TD-500 & TD-500E)
C60601390 - (TD-500D)

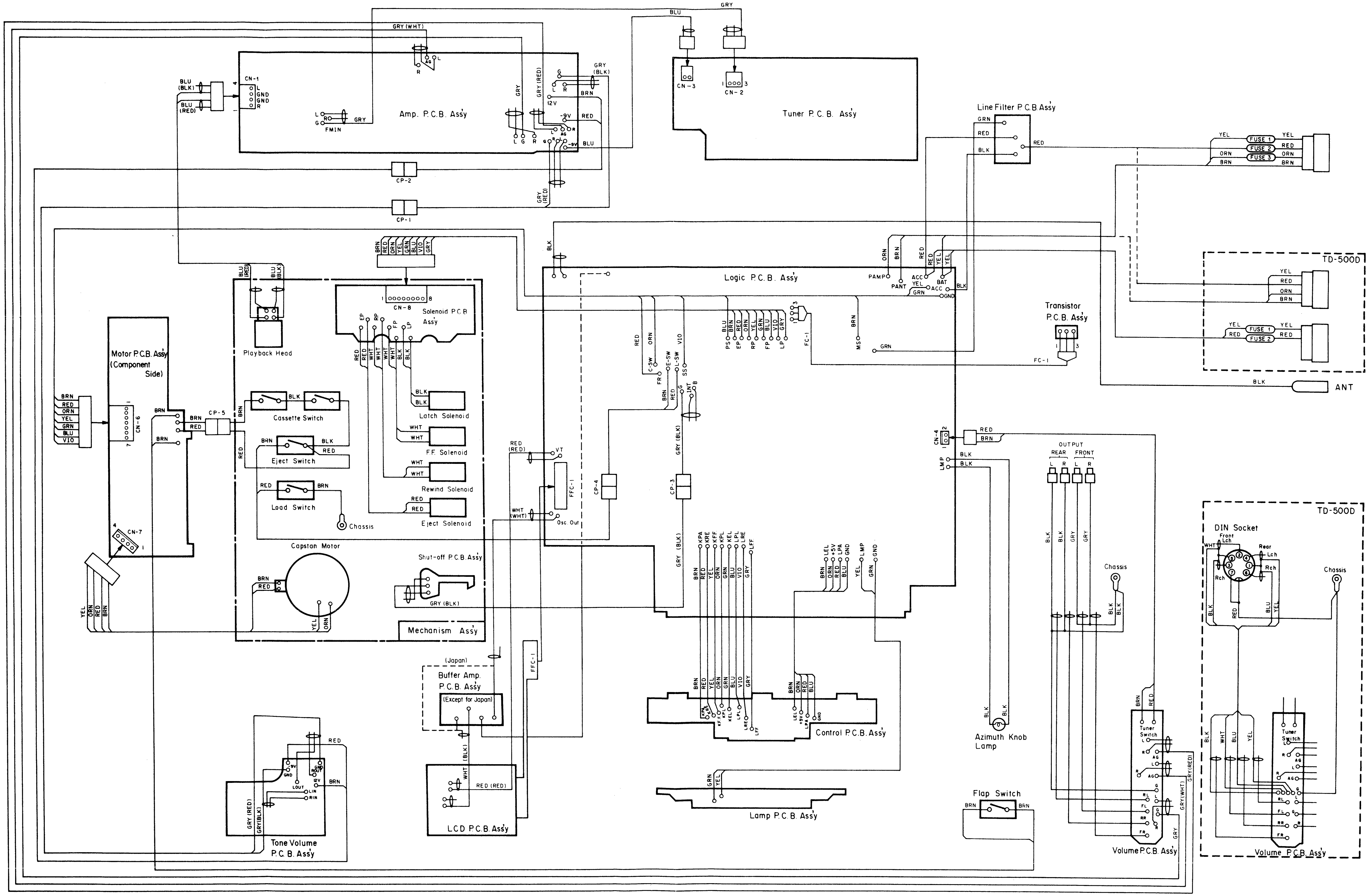

Amp. P.C.B. Ass'y
CN-1
FMIN
CP-2
CP-1
Tuner P.C.B. Ass'y
CN-3
CN-2
Line Filter P.C.B Ass'y
FUSE 1
FUSE 2
FUSE 3
TD-500D
Logic P.C.B. Ass'y
Transistor P.C.B. Ass'y
FC-1
ANT
Motor P.C.B. Ass'y (Component Side)
CN-6
CN-7
CP-5
Playback Head
CN-8
Solenoid P.C.B Ass'y
Cassette Switch
Eject Switch
Load Switch
Chassis
Latch Solenoid
F.F. Solenoid
Rewind Solenoid
Eject Solenoid
Capstan Motor
Shut-off P.C.B. Ass'y
Mechanism Ass'y
CP-4
CP-3
FFC-1
Osc Out
CN-4
OUTPUT
REAR
FRONT
Chassis
DIN Socket
Front
Rear
Lch
Rch
(Japan)
Buffer Amp. P.C.B. Ass'y
(Except for Japan)
LCD P.C.B. Ass'y
Tone Volume P.C.B. Ass'y
Control P.C.B. Ass'y
Lamp P.C.B. Ass'y
Azimuth Knob Lamp
Flap Switch
Tuner Switch
Volume P.C.B. Ass'y

Fig. 10.2 C60401001 - 05145 (TD-500 & TD-500E)
C60601001 - 01389 (TD-500D)

11. TIMING CHART

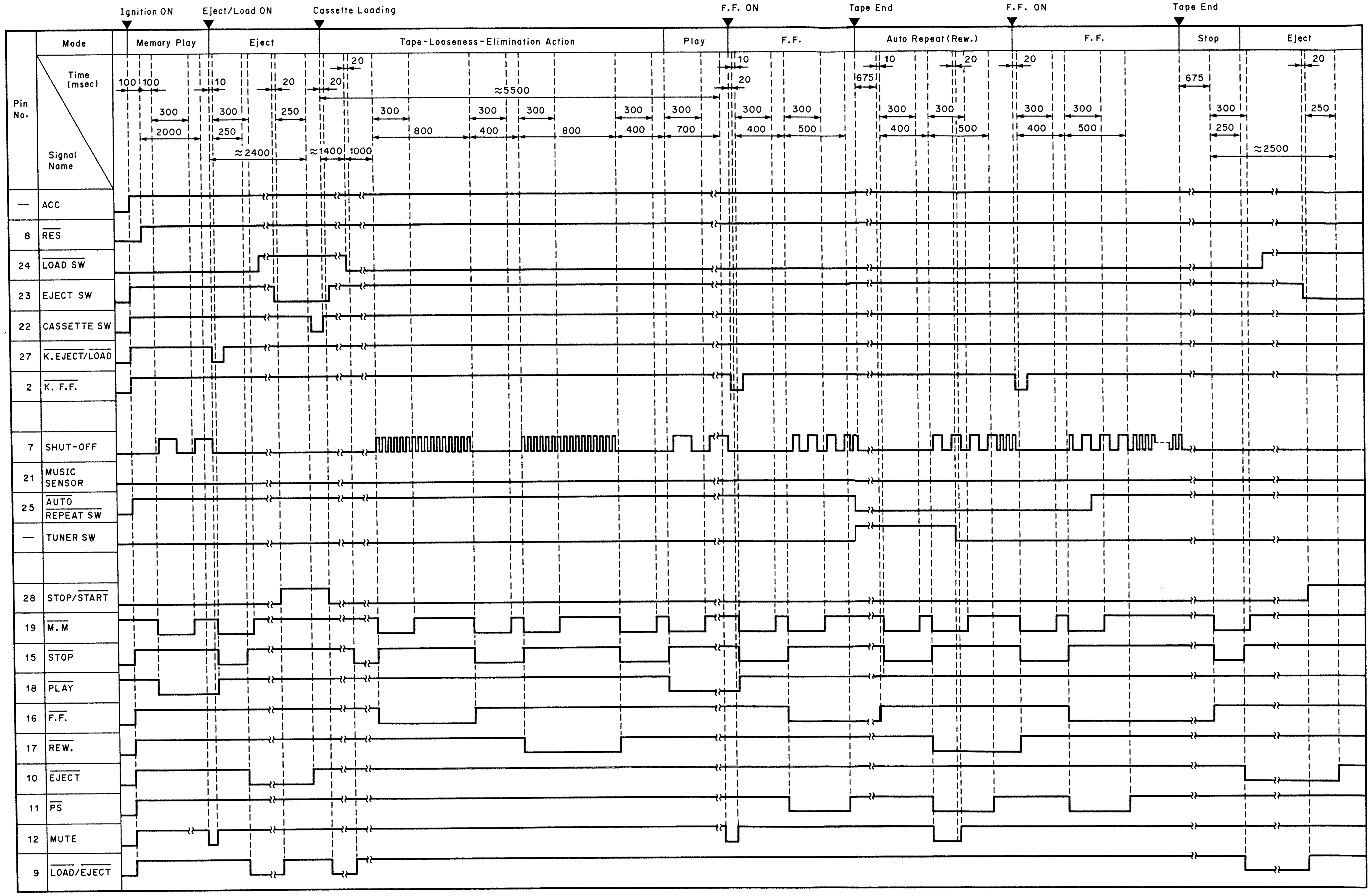

Ignition ON
Eject/Load ON
Cassette Loading
F.F. ON
Tape End
F.F. ON
Tape End
Mode
Memory Play
Eject
Tape-Looseness-Elimination Action
Play
F.F.
Auto Repeat (Rew.)
F.F.
Stop
Eject
Pin No.
Time (msec)
Signal Name
100 100
2000
300
10
300
250
≈2400
20
250
20
≈1400
1000
20
≈5500
300
800
300
400
300
800
300
400
300
700
10
20
300
400
300
500
675
10
300
400
20
300
500
20
300
400
300
500
675
300
250
≈2500
20
250
— ACC
8 RES
24 LOAD SW
23 EJECT SW
22 CASSETTE SW
27 K.EJECT/LOAD
2 K. F.F.
7 SHUT-OFF
21 MUSIC SENSOR
25 AUTO REPEAT SW
— TUNER SW
28 STOP/START
19 M.M
15 STOP
18 PLAY
16 F.F.
17 REW.
10 EJECT
11 PS
12 MUTE
9 LOAD/EJECT

Fig. 11

12. BLOCK DIAGRAMS

12.1. Tuner and Amplifier Section

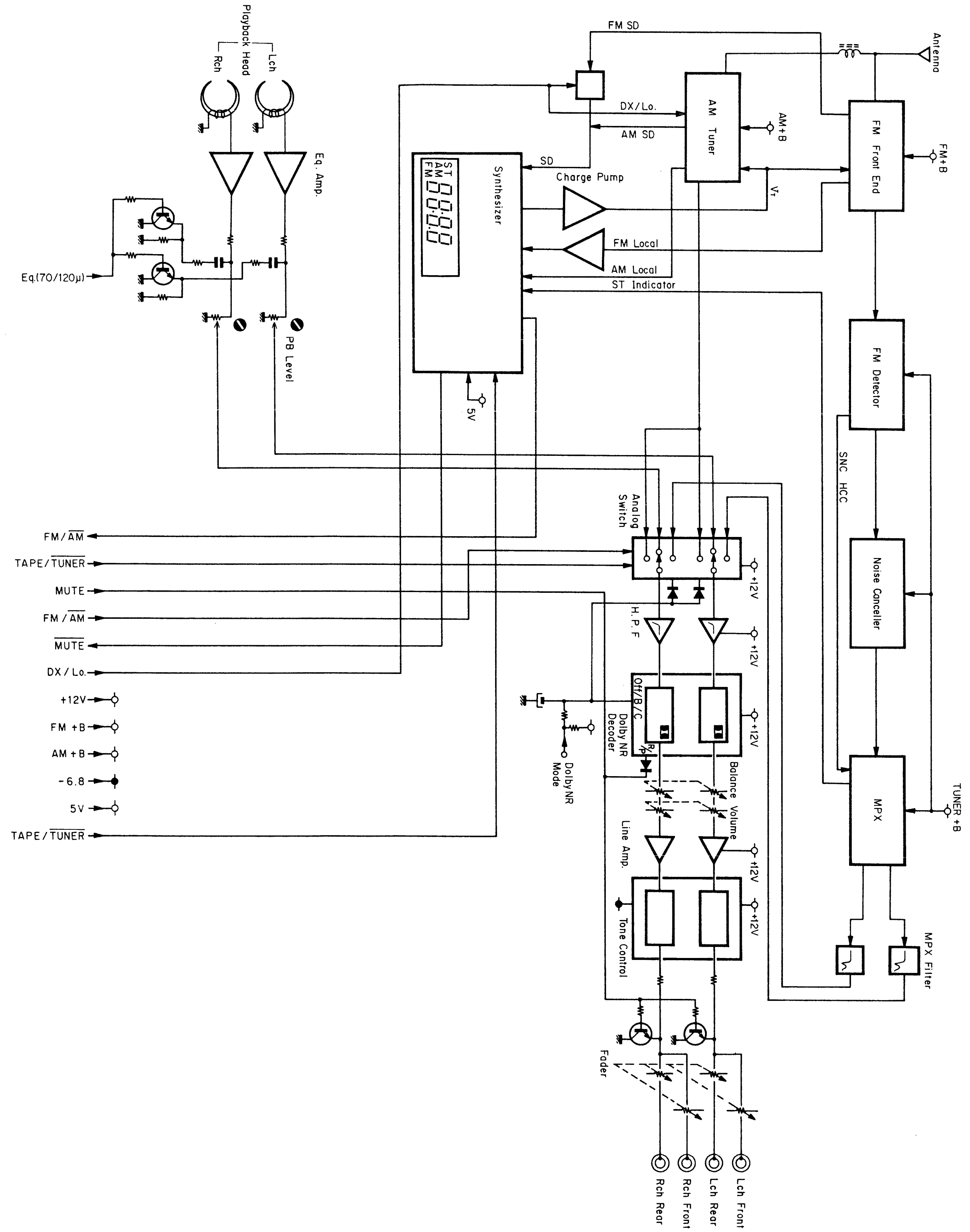

Playback Head
Rch
Lch
Eq. Amp.
Eq.(70/120μ)
PB Level
Synthesizer
ST
AM
FM
SD
Charge Pump
FM Local
AM Local
ST Indicator
5V
FM SD
DX/Lo.
AM SD
AM Tuner
AM+B
Vт
Antenna
FM Front End
FM+B
FM Detector
SNC HCC
Noise Canceller
MPX
TUNER+B
MPX Filter
Analog Switch
+12V
H.P.F
Off/B/C
Dolby NR Decoder
Dolby NR Mode
Balance Volume
Line Amp.
Tone Control
Fader
Rch Rear
Rch Front
Lch Rear
Lch Front
FM/AM
TAPE/TUNER
MUTE
FM/AM
MUTE
DX/Lo.
+12V
FM+B
AM+B
-6.8
5V
TAPE/TUNER

Fig. 12.1

12.2. Mechanism Control Section

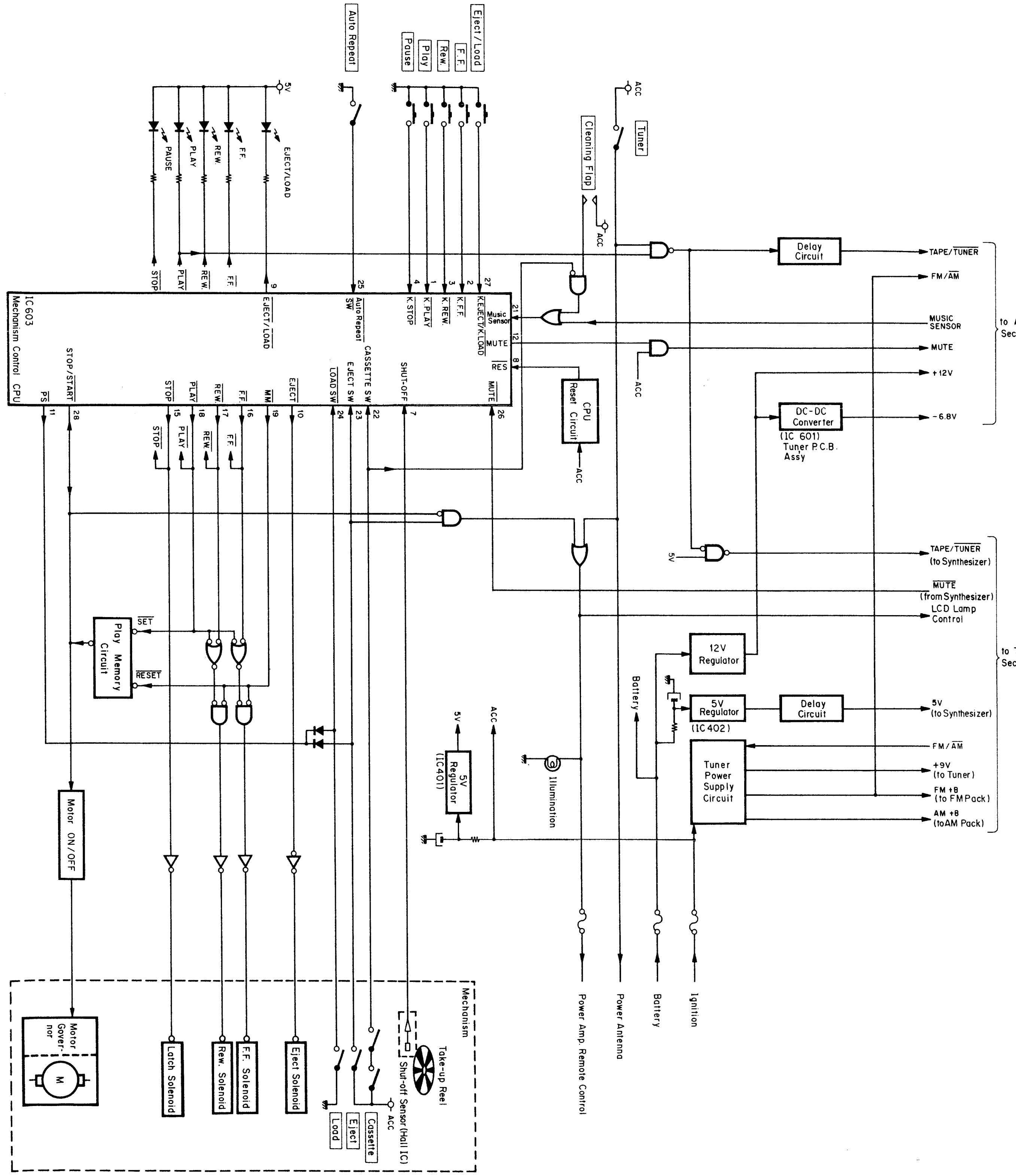

Auto Repeat
Eject/Load
F.F
Rew
Play
Pause
5V
PAUSE
PLAY
REW
FF
EJECT/LOAD
STOP
PLAY
REW
FF
EJECT/LOAD
Auto Repeat SW
K.STOP
K.PLAY
K.REW
K.FF
K.EJECT/LOAD
Music Sensor
MUTE
RES
MUTE
IC603 Mechanism Control CPU
PS
STOP/START
STOP
PLAY
REW
FF
MM
EJECT
LOAD SW
EJECT SW
CASSETTE SW
SHUT-OFF
CPU Reset Circuit
ACC
Cleaning Flap
Tuner
ACC
Delay Circuit
TAPE/TUNER
FM/AM
MUSIC SENSOR
MUTE
+12V
DC-DC Converter
(IC 601)
Tuner P.C.B. Assy
-6.8V
to Amp. Section
TAPE/TUNER (to Synthesizer)
MUTE (from Synthesizer)
LCD Lamp Control
to Tuner Section
5V
Play Memory Circuit
SET
RESET
12V Regulator
5V Regulator
(IC402)
Delay Circuit
5V (to Synthesizer)
Battery
Tuner Power Supply Circuit
FM/AM
+9V (to Tuner)
FM+B (to FMPack)
AM+B (to AM Pack)
5V Regulator (IC401)
ACC
Illumination
Motor ON/OFF
Mechanism
Motor Gover-nor
M
Latch Solenoid
Rew. Solenoid
F.F. Solenoid
Eject Solenoid
Load
Eject
Cassette
ACC
Shut-off Sensor (Hall IC)
Take-up Reel
Power Amp. Remote Control
Power Antenna
Battery
Ignition

Fig. 12.2

13. SPECIFICATIONS

- **Cassette Deck Section**

Tape Speed	1-7/8 ips (4.8 cm/sec.)
Wow and Flutter	Less than 0.07% WTD RMS Less than ±0.14% WTD Peak
Frequency Response	20—21,000 Hz ±3 dB (Nakamichi Test Tape)
Signal to Noise Ratio	**Dolby C-Type NR On** <70 μs, ZX Tape> Better than 70 dB (400 Hz, 3% THD, IHF A-WTD RMS) **Dolby B-Type NR On** <70 μs, ZX Tape> Better than 64 dB (400 Hz, 3% THD, IHF A-WTD RMS)
Channel Separation	Better than 34 dB (1 kHz, 0 dB)
Crosstalk	Better than 60 dB (1 kHz, 0 dB)
Winding Time (Fast Forward/Fast Reverse)	Approx. 75 sec. (with C-60 cassette)

- **Tuner Section**

—FM—

Frequency Range	87.5—107.9 MHz
Sensitivity	18 dBf (IHF)
50 dB Quieting Sensitivity	20 dBf (Mono)
Total Hamonic Distortion	0.15% (Mono 1 kHz) Input 65 dBf 0.3% (Stereo 1 kHz) Input 65 dBf
S/N Ratio	65 dB (Mono)
Frequency Response	30—15,000 Hz ±3 dB
Alternate Channel Selectivity	65 dB (±400 kHz)
Capture Ratio	2 dB
Image Rejection at 98 MHz	55 dB
IF Rejection at 98 MHz	80 dB
Stereo Separation	35 dB (1 kHz) at 65 dBf
Antenna Terminals	75 ohms (unbalanced)

—AM—

Frequency Range	530—1620 kHz
Sensitivity	33 dBμ

- **Preamplifier Section**

Frequency Response	10—50,000 Hz ±1 dB
Output Level/Impedance	0.35 V (Low) or 1.1 V (High)/1 kohms
Total Harmonic Distortion	Less than 0.005%
Tone Control	
Bass	20 Hz ±18 dB
Mid	200 Hz ±10 dB
Treble	20 kHz ±12 dB

Dimensions	178 (W) x 50 (H) x 165 (D) mm 7 (W) x 2 (H) x 6-1/2 (D) inches
Approximate Weight	1.8 kg/3 lb. 15 oz.
Power Source	14.4 V DC negative ground (10.8—15.6 V allowable)
Power Consumption	6.5 A Maximum

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